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MANUFACTURING IDENTITY: AN  
ISOCHRESTIC APPROACH TO THE  
CERAMICS FROM KISSONERGA-  
*AMMOUDHIA*

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## Abstract

Little is known about Cypriot society in the Early-Middle Bronze Age (2300-1650 BC). In the absence of any other excavated cemetery or settlement much of our information regarding western Cyprus during this period must be derived from pottery. The Middle Cypriot cemetery of Kissonerga-*Ammoudhia* is, at present, the largest corpus of pottery from this period and as such constitutes a corpus of information which can be used to test the nature and validity of evidence for expressions of identity. Although there appears to be broad similarities and a possible broadly similar culture with the rest of the island, the ceramics from *Ammoudhia* nevertheless show significant differences.

The question of style, where it might be found and what it may represent has been a thorny issue for archaeologist for several decades. Traditional stylistic analyses of pottery have concentrated on the finished product. However, examining the actual process of manufacture offers archaeologists a methodology where style can be observed not only in the static end product but in the various choices made by artisans during the manufacturing process.

This thesis applies such a methodology to a ceramic sample from Kissonerga-*Ammoudhia*, analysing and comparing these findings with those from other published sites. This places the assemblage in its context in wider Cypriot archaeology as well as providing a means to observe regional differences or similarities in manufacturing traditions. Using this methodology to identify and analyse the stylistic choices made by the *Ammoudhia* potters has led to some interesting results. The choices taken during the manufacturing process, in particular during the stages of preparation, hint at highly specialised and exclusive knowledge, so far not seen in mainstream ceramics of this period. This in turn has important implications for manufacturing identity in western Cyprus.





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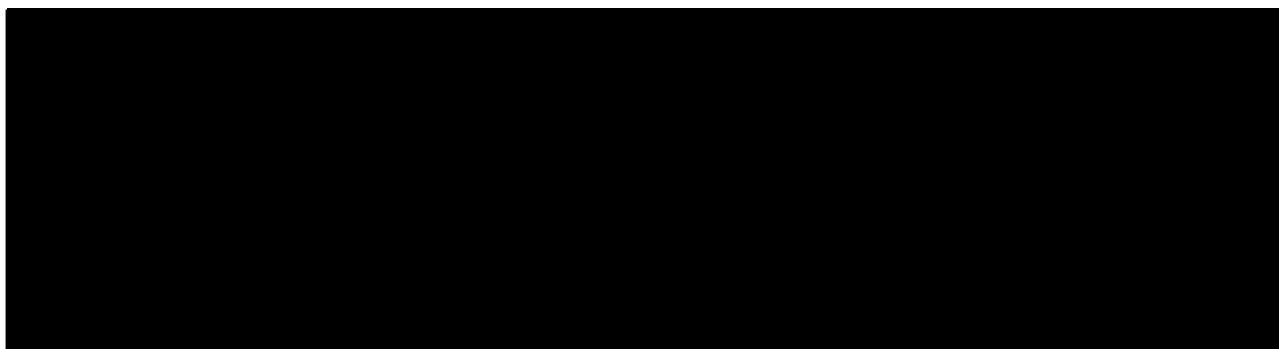
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## Declaration of Originality



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# **Chapter 1**

## **Introduction**

The aim of this thesis is to present a stylistic analysis of the ceramics from the Early-Middle Bronze Age cemetery of *Kissonerga-Ammoudhia* in western Cyprus. I intend to use a methodology based on stylistic theory; in particular James Sackett's model of isochrestic variation. This type of stylistic theory and methodology has seldom been applied to Near Eastern ceramics, but by applying this model to a prehistoric Cypriot assemblage I will illustrate how it can be used to give new insights into the pottery-making process as well as raising new questions and approaches for future research.

Ceramics have always proved a fruitful field for stylistic studies. The nature of pottery makes it especially useful for both transmitting and receiving stylistic messages and this has been a rich source of stylistic analyses for several decades. The additive nature of pottery manufacture also makes it a particularly good area of study for the processes of manufacture and the choices involved in that process (Irving 2004: 9). Although the area of technology and manufacture has been applied to various archaeological and anthropological studies of pottery, it has yet to be utilised to any extent in mainstream Near Eastern pottery analysis. It is the purpose of this thesis to examine an Early-Middle Cypriot ceramic assemblage, with specific reference to stylistic analysis of technology and pottery manufacture.

Pottery has played an important role in the archaeology of Early-Middle Bronze Age Cyprus. Chronology in particular has been set (rightly or wrongly) largely on the basis of ceramics; with phases being established on the basis of pottery wares and styles (Rice 1987: 249-51). Cypriot pottery has also on occasion been stylistically analysed, again with the emphasis on understanding social structure and interaction. In most cases this has constituted traditional analyses of ware, form and decoration. The aim of this thesis is to apply Sackett's theory of isochrestic variation to the assemblage of *Kissonerga-Ammoudhia* to identify and analyse the stages of pottery production where isochrestic choice can exist. This will give a more intimate and

fuller insight into the society in question than, I will argue, a traditional analysis of style would supply.

Examining pottery manufacturing processes can illuminate the choices made by the potter at different stages of production and identifying these choices can provide insights into the traditions and culture of the society in question. Isochrestic choices are made consciously or unconsciously, from a strong social tradition and are less likely to change than easily observed elements, such as decoration. However, as part of a stylistic analysis it would be wrong to ignore such a vast reservoir of style that decoration offers. Therefore, I intend to study decoration not from a traditional stylistic/ethnic method, but from a technological/manufacturing perspective, observing, for example which tools were chosen to make particular decorations. In this approach, I will argue, one can see and perhaps understand more than by analysing decorative motifs alone. I intend to show that by isolating and examining each particular moment of isochrestic choice a wide and rich layer of patterns appears giving a rich and unforeseen insight into the choices available to and made by past societies.

Ceramics are a rich source of stylistic variation, providing information on social structure, economy, regionality and beliefs of past societies and as such have been a source of many different theoretical approaches. Many of these are ethnographical studies, which it should be emphasised at this early stage, is outwith the scope of this study. It will be recognised, however, that social groups can be identified through the 'style' of their material culture and this can also reflect the contact and relationships with other social groups. Recognising how and why social groups should choose one style or one way of doing something over another equally viable way is the subject of this study.

It is the purpose of this study to clarify and contextualise these differing approaches, before conducting an analysis of the styles found at a specific site – the Early-Middle Cypriot cemetery of *Kissonerga-Ammoudhia*. There is still little known about Cypriot society in this period and this cemetery is one of the only sites, let alone the

largest, to be excavated in the west. This site was chosen as it is a large, recently excavated ceramic assemblage from a period and area where there is little archaeological evidence. In the absence of any other excavated cemetery or settlement much of our information regarding western Cyprus during this period must be derived from pottery and *Ammoudhia* is, at present, the largest corpus of pottery from this period and as such constitutes a corpus of information which can be used to test the nature and validity of evidence for isochrestic choice.

What is known of the site of Kissonerga-*Ammoudhia* consists of a Bronze Age Cemetery situated in Kissonerga Village, 5km north of Paphos on the south-west coast of Cyprus. It is mentioned by Hadjisavvas in his survey of Paphos (Hadjisavvas 1977: 226) where he lists two cemeteries and a settlement. It is also listed in the Western Cyprus Survey conducted in 1977 by the Lemba Archaeological Project. In 2000 part of the cemetery was excavated as a rescue operation conducted by Dr Stathis Raptou and a team from the Paphos Museum. During this excavation some 19 rock cut chamber tombs were excavated and were found to be rich in grave goods, mostly pottery. This material was first studied in 2005 as part of my undergraduate dissertation (Graham 2005). This original study comprised of studying a selection of the assemblage and comparing it to material from other excavated sites in Cyprus with regard to regional differences. In this original study I concluded that the assemblage had a great deal of information to yield and would in particular benefit from a more in depth stylistic analysis. It is such an analysis with which this thesis is concerned.

### ***Methodology***

As part of my previous study of this assemblage (Graham 2005) a brief examination of the entire assemblage was conducted. Four tombs were selected as being particularly representative of the assemblage, (the entire assemblage does seem to be fairly uniform) two (5 & 15) were studied by myself for signs of social regionalism and two (10 & 16) by Thomas Lucas for his undergraduate dissertation on evidence of dating and chronology. The pottery from these tombs was firstly reassembled and then studied and recorded. Once the ceramics were reconstructed and recorded they



were drawn and photographed using a macro lens, the drawings and photographs were numbered and recorded.

For this thesis these four tombs were combined into one sample. These were re-examined and records were updated and improved. Information on each vessel and sherd was entered into both a Microsoft XL spreadsheet and a Microsoft Access database which can be added to and completed in the future and will serve as a source of information for future research. The sample was analysed particularly for evidence of technology and manufacture. This was done by research into the stages of the pottery manufacturing process. The stages set by Rye (1981) were selected as being particularly succinct, separating essential stages from non-essential ones, which in turn may prove stylistically noteworthy. The sample was then tested for evidence of manufacture and particularly isochrestic choices made at each of Rye's stages. These criteria were applied to the few excavated and published contemporary sites, which it was hoped would illustrate the nature of isochrestic choices being made by other contemporary potters. This information was then collated and interpreted accordingly.

### *Chapter Summary*

Chapter Two provides a background to the Cypriot Bronze Age, discussing chronology and geography/topography of Cyprus. A description of the main wares found in Cyprus during this period is followed by a brief discussion on the different regions and the various prehistoric Bronze Age sites excavated and recorded in these regions. This provides information on the choices being made by potters at other sites in Cyprus before going on to conclude with a general description of the main fabrics, forms and decorations found at *Ammoudhia*.

In discussing style in archaeology there are many divergent but equally valid theories. It is not the purpose of this thesis to claim a single overarching theory or to suggest that any one theory is superior to the others. However, there are two fundamental assumptions that most style theorists would agree. Firstly that style is a means of doing something and secondly it includes a choice (Hegmon 1992: 517).

Chapter Three consists of a synopsis of the most influential theories and theorists of the last fifty years. In this chapter I will also discuss previous studies of ceramics of the Early-Middle Cypriot and how this study may fit into that corpus of work. Finally, I shall examine the pottery-making process taking from Rye (1981) the separate stages in manufacture and provide a brief analysis of what choices may be available at each stage in the process.

In Chapter Four I shall closely examine the *Ammoudhia* material for evidence of isochrestic variation at each stage of pottery production, discussing the choices available for each stage and the evidence for choices made at other sites in comparison to those made at *Ammoudhia*. This chapter comprises mainly of original analysis, comparisons and hypotheses drawn from this analysis.

Chapter Five is a conclusion of the findings and a critical discussion of the analysis, including a synopsis of what evidence there may be for pottery manufacture in the Early-Middle Cypriot and a hypothesis drawn from this research. Since one of the aims of this thesis is to identify areas worthy of future investigation, a large part of this chapter will be dedicated to recommendations for future research and potentially useful methodologies.

## Chapter 2

### Cyprus during the Early-Middle Bronze Age

The aim of this chapter is to give context to the time and place in question. Firstly, I intend to give a background to the Cypriot Early-Middle Bronze Age, from geography and chronology to spatial descriptions of the surveys and sites excavated so far. I shall also give a brief introduction to the main ceramic wares of the period. This will give an overall context to the assemblage, allowing inter-site comparisons and enabling a comprehensive stylistic analysis in later chapters. I shall conclude this chapter by giving a comprehensive description of the site of *Kissonerga-Ammoudhia*, its location, excavation and particular issues pertinent to this investigation.

With an area of 9251 km<sup>2</sup> the island of Cyprus is the third largest in the Mediterranean. Its location in the eastern Mediterranean some 69 km south of Anatolia and 101 km west of the Levantine coast today places the island in the same general climatic zone as the surrounding coastal regions, with a typically semi-arid Mediterranean climate (Fig.1). The geology of Cyprus is complex. However, the island can be separated into six geological zones (Fig.2): the Troodos Massif mountain range in the central west which was formed by molten rock, the largely limestone Pentadaktylos (Kyrenia) range in the north east and low lying regions, the Mesaoria Plain lying between the two mountain ranges, the Karpass Peninsula in the extreme north east and finally the coastal belt, consisting of the southern chalk plateaus and the Paphos District in the south west, which is predominantly rocky and indented but with some sandy beaches (Price 1979: 6). The geographical and physical landscape of Cyprus has been a key influence on human society and communications since the earliest occupation of the island.

The geology and topography on the south western coastal plain is equally diverse. Consisting of narrow coastal plains and river valleys which develop inland to an extensive limestone plateau, this in turn backs onto the foothills of the Troodos Mountains (Bolger, McCartney & Peltenburg 2004: 195). Geological weathering

coupled with rainfall runoff from the Troodos has given rise to thick alkaline soils where olives, vineyards and banana plantations now flourish. In prehistory it is supposed that the island as a whole was extensively forested, the trees being used throughout antiquity leaving the scrub that we see today. This deforestation has damaged the drainage system and made access to perennial water more difficult than it was in antiquity.

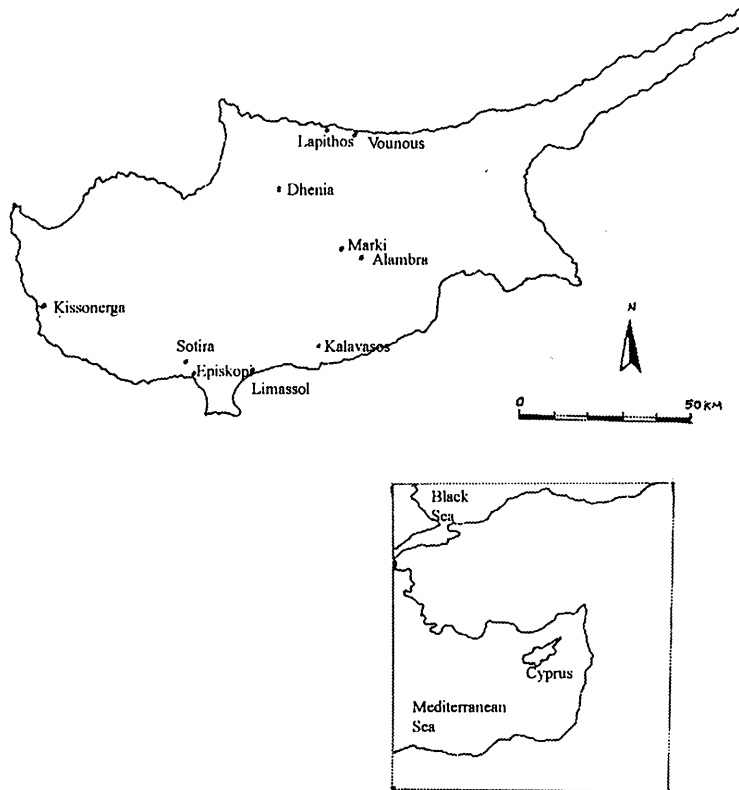


Figure 1: Map of Cyprus showing sites mentioned in the text

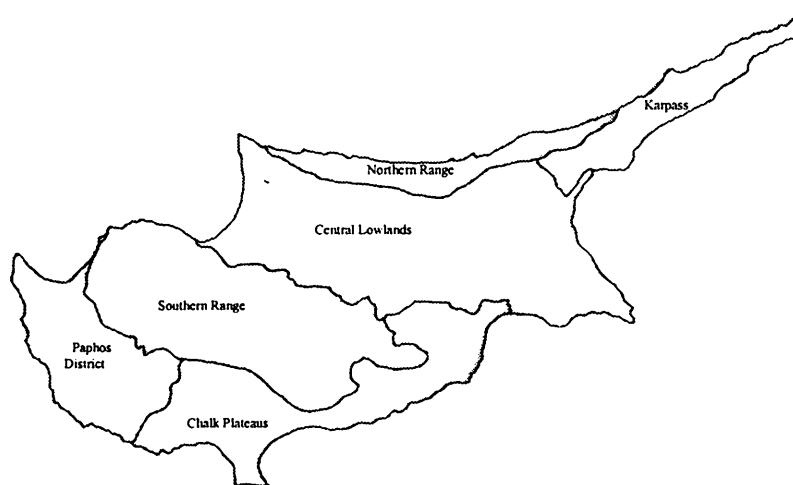


Figure 2: Map of the geological regions of Cyprus (Adapted from Price 1979: 4)

## Chronology

The chronology of the Bronze Age in Cyprus is still widely debated amongst archaeologists and different dates and terminologies using criteria such as dendrochronology, radiocarbon dating, changes in ceramics and social interaction have been proposed. As chronological issues are not the central concern of this thesis, a traditionally accepted chronology is being used (Table 1).

| Chronological Period            | Cultural designation | Years B.C. |
|---------------------------------|----------------------|------------|
| Late Chalcolithic               | Late Erimi Culture   | 2800-2400  |
| Chalco/Bronze.Age<br>Transition | Philia Culture       | 2500-2300  |
| Early Bronze Age                | Early Cypriot        | 2300-2000  |
| Middle Bronze Age               | Middle Cypriot       | 2000-1650  |
| Late Bronze Age                 | Late Cypriot I       | 1650-1450  |
|                                 | Late Cypriot II      | 1450-1225  |
|                                 | Late Cypriot III     | 1225-1050  |

Table 1: Chronology of the Cypriot Bronze Age (taken from Bolger 2003: 214)

The first definitive work on prehistoric Cyprus was set by Einar Gjerstad with his *Studies in Prehistoric Cyprus* (1926). In this work Gjerstad set the typologies of prehistoric Cyprus using ceramics, by systematically describing wares, it was Gjerstad that first separated RPW into the four distinct wares I-IV. He also described clay colour and consistency as well as surface treatment and he associated the wares with forms and decorations thus providing a comprehensive and still influential typology.

Criteria establishing chronology of the Cypriot Bronze Age was first set by Åstrom and Stewart as part of the Swedish Cyprus Expedition, using the ceramics, particularly Red Polished Ware (RPW) from sites in the north excavated in the 1930s, such as Vounous and Lapithos (Åstrom 1972; Herscher 1991: 45). Åstrom's thesis *The Middle Cypriot Bronze Age* (1957) and Stewart's *Early Cypriot Bronze*

*Age* are still as relevant as guides to ceramics as they were on publication. The criteria set by Åstrom and Stewart have been used for islandwide contexts until very recently when excavations in the south at sites such as Episkopi-*Phaneromeni* have illustrated the particularly regional nature of pottery during the Early and Middle Bronze Ages (Herscher 1981: 80). This raises questions regarding pan-regional typologies, as there are several different types of RPW described in recent literature, and each site appears to have its own peculiarities. These differentiations also have implications for chronology, as wares and decorations may appear in areas later or earlier than first expected. For example, Catling suggested that the south west of the island was unpopulated during the Middle Cypriot because of the lack of White Painted Ware, which was thought to be the defining ware of the period (Herscher 1981: 80). The evidence from *Phaneromeni* and *Ammoudhia* shows that these areas were indeed occupied, but the occupants, for whatever reasons, simply did not adopt WPW.

The beginning of the Early Cypriot was a dynamic period of upheaval which witnessed the disappearance of the previous Chalcolithic Erimi culture and the emergence of new technology, material culture and society (Peltenburg 1996: 24). Increased use of copper, the introduction of the plough and the secondary products revolution meant changes in agriculture and economy (Knapp 1990: 156-7) whilst changes in pottery production such as new vessel shapes suggest a change in how food was prepared and consumed. Architecture and social organisation also changed, as we see the complete abandonment of Chalcolithic roundhouse settlements and the emergence of rectangular buildings and large communal cemeteries, with chamber tombs replacing the pit graves of the Chalcolithic (Peltenburg 1998: 257). Several theories have been put forward to explain this upheaval, from Anatolian migration (Frankel 2000: 168; Mellink 1991: 173) to local adaptations (Knapp 1990: 156; Manning & Swiny 1994: 171). It seems undisputed that at this period contacts, particularly with Anatolia, intensified and Cyprus emerged from isolation, perhaps due to its abundance of copper, and began to play a part in the wider environment of the eastern Mediterranean. The Middle Cypriot seems to have been a smooth continuation of the Early Cypriot; both periods appear

to have economies still based primarily on agriculture. Although there is an increase in the use of copper and the introduction of chamber tombs (which may represent the emergence of corporate kinship groups) it is not until the Late Cypriot that we see the emergence of what may be termed state level societies, with large, fortified settlements, social hierarchy, international trade and an islandwide homogeneous material culture (Steel 2004: 149).

The development of Cyprus from small village-like communities to state level societies in this relatively short period is by no means clear. Unlike the city states of the Near East, Cyprus had no history of urbanism and until the LC had remained an independent, inward looking island that certainly had contact with the mainland but had never, at least since early colonisation, traded or integrated to any great extent. There are several well excavated LC sites such as Kition and Enkomi that have yielded much information about the period. Textual evidence such as the Amarna letters (Moran 1992) has also provided a great deal of information on the eastern Mediterranean networks of trade and kinship at this time (unfortunately this thesis does not have the scope to explore the Alashia question at this stage). However, the scarcity of MC sites in Cyprus has meant that the social and economic developments that led Cyprus to open up to become one of the major states in the eastern Mediterranean network remain largely unanswered (Peltenburg 1996: 36). The study of the material from *Kissonerga-Ammoudhia* may go some way to answering these questions, as it appears to date mostly from the MC, although there are certainly some late EC and LCI elements, the majority of the ceramics are homogenous MC wares. There is not scope in this present study to encompass this issue; however, it is certainly an area in which this material may be of considerable use in future studies.

### **Early-Middle Cypriot Ceramics**

As stated above, the emergence of the Bronze Age in Cyprus is accompanied by changes in ceramic style, form, function and production. The red and white and monochrome ware of the Chalcolithic is replaced by RPW of the Philia culture of the

Early Cypriot. RPW continues as the main island-wide fabric until the later Middle Cypriot, when it is replaced to a large extent by White Painted Ware (WPW). Cypriot potters seem to prefer the hand made method of making pots as it is not until the Late Cypriot that we see the emergence of wheel made pottery.

Red Polished Ware occurs in many different forms, as jugs, juglets and bowls of varying sizes become more common. Some of these vessels are also highly decorated by incision and/or relief, some with fabulous appendages such as animal heads and even composite vessels showing people, such as the Vounous bowl, which appears to represent a religious sanctuary (Morris 1985: 281-3). The forms and decoration show a distinct regionality, suggesting that whilst islandwide contact existed, it would appear that maintaining local community traditions was important to the potters. This has meant that several variations of RPW occur and the typology can at times be extremely confusing. For the purposes of this research, where few items of RPW occur, I have used the general term RPW apart from Coarse Ware (CW), which is essentially RPW but coarser, softer with large inclusions and usually clearly manufactured for cooking purposes.

White Painted Ware is the traditional typological marker for the Middle Cypriot (Steel 2004: 135). However, it is not an island-wide ware and more recent excavations suggest that it is primarily a regional variant belonging to the north and east. Vessels typically occur in the form of small juglets and bowls and, like DPBC, are fired at high temperatures implying some skill and specialisation (Steel 2004: 135). White Painted Ware does not occur at all in the *Ammoudhia* assemblage, but its importance as a chronological and regional marker, as well as the sophisticated nature of its manufacture make it an important material for comparisons in pottery manufacture, technological choice and Middle Cypriot society.

The Drab Polished Ware (DPW), or Drab Polished Blue Core Ware (DPBC) occurring in this sample appears to be a southwest tradition, occurring mainly in this limited area. Any Drab Polished ceramics found elsewhere are most likely an import from this area, a hypothesis that will be further discussed throughout this thesis. It



was first recognised by Åstrom who in the 1950s dated DPW to the late MC (Åstrom 1972: 179). However, this analysis was based on only six pieces from museum displays. Recent excavations and studies may suggest a much earlier date (Herscher 1996: 156).

### **Kissonerga-Ammoudhia**

The modern village of Kissonerga is situated in the Ktima lowlands, a narrow part of the arable fertile plain between the Troodos foothills and the sea, approximately 5 km north of modern Paphos (Fig.3). This narrow plain stretches down the west coast as far south as Petra Tou Romiou, where the Troodos meet the sea, effectively cutting off the west coast from overland contact with the south (MacLaurin 1980: 245). The area around Kissonerga has a long history of human occupation, dating back to the very early Cypro-PPNB site of Kissonerga-*Mylouthkia*. The nearby site of Kissonerga-*Mosphilia* is also archaeologically important being the only known site to show continuous occupation from the Neolithic through to the Philia culture.

The west coast of Cyprus has been surveyed several times. Catling suggested that the extreme paucity of Middle Cypriot ceramics on the west coast signifies a depopulation of the area (Catling 1962: 131). However, one of the very few sites he does mention is Kissonerga-*Ammoudhia* which is situated on a terrace on the south-eastern edge of the modern village of Kissonerga (MacLaurin 1980: 245). Indeed, MC tombs have been discovered in the *Ammoudhia* area at least since 1947 (Maliszewski 1997: 68). The Department of Antiquities of Cyprus commissioned a survey of the area in 1975 where Hadjisavvas recognised two cemeteries (Map Location: Sheet XLV Plan 42, Plots 9, 15, 288, 345, 349) and a settlement (Map Location: Sheet XLV Plan 42, Plots 15, 16, 286-190, 294-349), overlooking the Agriokalami river from the west, with the Chalcolithic site of Lemba *Lakkous* on the eastern side of the river (Hadjisavvas 1977: 226). Between 1977 and 1985 surveys were also conducted by the Lemba Archaeological Project (LAP) and several new sites were located, including the MC settlement of Kissonerga-*Skalia* (Peltenburg 1983: 49).

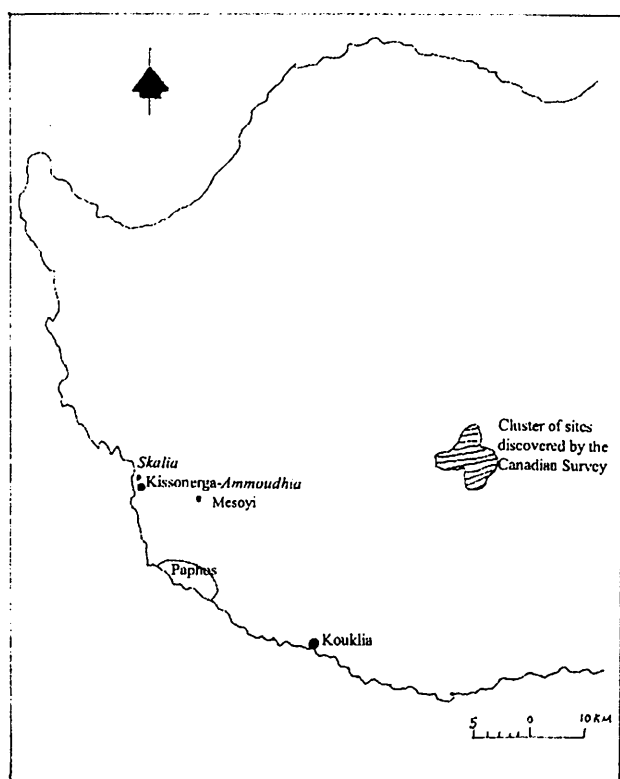


Figure 3: Map of Western Cyprus (adapted from Maliszewski 1997: 72)

The ceramics from Kissonerga-Ammoudhia have been examined before, particularly by Lucy MacLaurin in her PhD thesis (1980). Although only surface finds were studied, her description of the fabric, forms and especially decoration shows distinct similarities to the material examined in this study. Hadjisavvas in his 1975 survey observed that the ceramics from the settlement and cemeteries appeared to be homogenous and he goes on to suggest a local mass production of small to miniature pottery (Hadjisavvas 1977: 225). The complex geological structure of the west coast would suggest a variety in the clays and colours of slip used, but this does not seem to be the case. The majority appear to be of the Drab Polished Blue Core fabric with a penchant for the light red range of slip colour which may all come from the same clay bed (MacLaurin 1980: 247-256).

In 2000, due to the construction of holiday apartments, part of the cemetery was excavated as a rescue operation conducted by Dr Stathis Raptou of the Paphos Museum and a team of volunteer students from LAP, lasting from July 26<sup>th</sup> to

August 9<sup>th</sup> 2000. The following account is largely taken from notes kindly supplied by Dr. Raptou, to whom grateful acknowledgement is made. During this excavation some 19 rock cut chamber tombs were excavated, with varying degrees of preservation. The first few tombs to be discovered were already largely destroyed by bulldozers, meaning that most of the tomb architecture was already destroyed and tombs could only be identified by sherd scatter. Others had their tops sheared off by the bulldozers, and in some of these pots were found in the higher reaches either on shelves or by floatation. The later tombs to be discovered were excavated carefully, although still under extremely limited time constraints. All of the following tomb descriptions are again courtesy of Dr Raptou.

Of the 19 tombs excavated four (7, 11, 12, 14) were almost completely destroyed, yielding at the most one tray of pot sherds each. The rest were in varying stages of preservation, but it could be gauged by Dr Raptou that the tombs showed a high degree of homogeneity, each being curvilinear, with a diameter of between 1.8 and 2.3m. The almost round nature of some of the tombs is more suggestive of pit rather than chamber tombs, although this remains questionable. Dr Raptou suggests an Early Cypriot date due to the nature of the ceramics (Raptou, personal communication), although what he describes as RPW in his excavation notes on closer examination appears to be DPBC.

According to Dr Raptou, every tomb contained a rich assemblage of pottery vessels, a high proportion of which were jugs/juglets. Many of the smaller, fine, decorated juglets were originally placed in shallow pits in the floor and were mostly excavated in situ and intact. Unfortunately, the same cannot be said for the human remains which were extremely poorly preserved, making any gender or age assumptions impossible. Even the grave goods that can be categorically linked to a particular burial are too ambiguous to be gendered; traditionally 'feminine' goods such as beads and spindle whorls being found in the same context as the only 'masculine' weapon (Tomb 18).

As well as pouring and storage vessels four tombs also contained fragments of ceramic braziers (6, 15, 16, 18), two of which (6 & 15) were discovered in a blackened area of soil surrounded by blackened vessels. Although suggestive of some kind of funerary burning/cooking ritual, Dr Raptou proposes that the blackening may be due to the taphonomic process of organics left in this area. Necklace beads were discovered in 6 of the tombs (2, 6, 13, 15, 16, 19), usually *in situ* with a skeleton. Ceramic spindle whorls were also discovered in four of the tombs (6, 8, 13, and 18). Although the ceramics suggest a prehistoric Bronze Age date, there is very little evidence of metal. Only two definite bronze items were found: a bronze digging tool from Tomb 17 and from Tomb 18 a bronze spear tip measuring 9.5cm which shows traces of wood still attached. Fragments of two metal ear covers were discovered in tombs 13 and 15, but it is unclear whether this metal is copper or bronze. However, four of the tombs also yielded metal sharpening stones, suggesting that metal use was a part of the society. Finally, two oval shaped picrolite pendants were recovered from Tombs 6 and 9. Use of picrolite is known from the Aceramic Neolithic, however it is most well known from the Chalcolithic period in the iconic form of the cruciform figurine. Although not unknown in the Bronze Age picrolite is comparatively rare when compared to the preceding Chalcolithic, and when it does appear it is not in the anthropomorphic cruciform style.

Although most of the tombs were damaged to a lesser or greater extent, one tomb, number 6, remained almost intact and was excavated with great care, yielding some interesting results. An almost circular room, the entrance and part of the dromos remained intact. The entrance was covered by a large rectangular stone on either side of which were two large vessels. The entrance into the tomb was stepped with the floor being considerably lower than the other excavated tombs, survival may be due to its greater depth. Outside the tomb just to the south of the entrance were two large amphorae which appear to have been deliberately placed upside down and a jug on its side wedged in next to the amphorae with small stones. Inside the chamber to the eastern side were some smaller vessels, including the fragments of a ceramic brazier in blackened soil. Dr Raptou conjectures in his notes that both these phenomena may signify funerary ritual. In the right wall of the chamber a shelf at

about ground level had been cut out, on which was the remains of a skeleton *in situ* with some beads, small, fine vessels and a ceramic spindle whorl. The north western side contained traces of another burial surrounded by a number of intact vessels in good condition with some oval sea pebbles seemingly placed on the bones. A picrolite pendant of oval shape with thin linear incisions was also found at the side of this burial. It should also be noted that as well as many intact vessels some 20 trays of sherds were also taken from this tomb.

The ceramics from the excavation of 2000 appear to be similar to those described by Hadjisavvas, Herscher and MacLaurin. (Hadjisavvas 1976: 228; Herscher 1993: 73; MacLaurin 1980: 718) An examination of the trays suggests a Middle Cypriot date with an overwhelming majority of DPBC vessels, apparently mostly medium sized jugs and juglets. There also appears to be a large number of small round spouted juglets and it is this type of vessel that shows by far the most incised decoration. Decoration on the vessels consists of snake-like relief on some larger bowls and, by far the most common, incisions of predominantly circles with a central dot and parallel lines enclosing a line of dots, appearing almost exclusively on small fine juglets and flasks. RPW is also present in significant proportions, particularly in larger amphorae and relief decorated vessels which may be of an earlier date. What appeared at first to be Black Polished Ware, but is more likely to be a southern type of Brown Polished or Red Polished South Coast Ware is also represented in small amounts in two of the tombs. There is absolutely no evidence of WPW, the defining ceramic style of the Middle Cypriot for much of the rest of Cyprus. The ceramics from four of the tombs will be further analysed and discussed throughout this thesis. Before this I should now like to examine the other excavated sites and surveys of the Early-Middle Cypriot and their ceramics. This will help contextualise the *Ammoudhia* ceramics as well as offering documented evidence of contemporary pottery manufacture and isochrestic choice from sites, some of which progressed more rapidly to urbanism and therefore may offer an opportunity to examine potential social causes of the rise of urbanism.

## Early-Middle Cypriot Research to date: Excavated Sites and Surveys

### *The West Coast*

To date no full research excavation has been conducted at any Early-Middle Bronze Age site in Western Cyprus. All information comes from surveys and rescue excavations driven by construction and development. Although Maliszewski lists some 16 settlements and 5 tomb groups from the Middle Cypriot period (Maliszewski 1997: 79) for the purposes of this investigation it is difficult to make full comparisons. However, there are some sites, where the ceramics have either been sufficiently published or show clear similarities with this material that deserve mention.

Extremely close to the cemetery of *Ammoudhia* is the settlement site of Kissonerga-*Skalia* (Figs.3 & 12). This settlement was discovered during the LAP survey in 1977-8 and a selection of the surface material has been published by Graham Philip (1983). The material seems to show distinct similarities with the *Ammoudhia* assemblage, in particular the large number of DPBC vessels which appear pockmarked with a dominant blue core that obscures the fabric colour, similar to the *Ammoudhia* material (Philip 1983: 48). From the published sherds it would appear that the *Skalia* corpus contains more bowls and coarse ware than at *Ammoudhia*. Although the classic circles with central dots and framed rows of dots appear occasionally on bowls, the *Skalia* decoration appears to be more varied, containing examples of hatched triangle, parallel lines and zigzags (Philip 1983: 49). This may be to do with a difference in date or the fact that settlement ceramics may differ from funerary ceramics. It must also be emphasised that both are only samples of a larger, as yet unpublished, corpus. The evidence from *Skalia* shows a geographical and chronological proximity to *Ammoudhia*, suggesting that *Ammoudhia* may have been the burial place for the people of *Skalia*; however, this cannot be confirmed without excavation of the *Skalia* site.

Mesoyi-Katarraktis is a Middle Bronze Age tomb located 5km northeast of Paphos and was excavated in 1988 by Dr Demetrios Michaelides of the Department of

Antiquities and published by Herscher and Fox (1993) (Fig.3). The pottery from the tomb consists almost entirely of DPW, including two bowls, two jugs, a spindle whorl and a cutaway spouted juglet neck sherd. Also apparent were a Coarse Ware cup and RPW cooking pot sherds. The jugs appear to be larger in size to the majority at *Ammoudhia*, being an estimated 46cm in height and 31.5cm in diameter and the decoration of zigzags and punctures on one example does not correspond to *Ammoudhia*, (Herscher & Fox 1993: 70), although the shape, fabric description and colour do correspond to the jugs of that size in the *Ammoudhia* sample (P15.12: Fig. 65, Plate IX). Herscher also mentions one of the spouted bowls, which although having parallels on the south coast has a remarkable similarity with one collected from an earlier disturbed deposit of *Ammoudhia*. She suggests that the *Katarraktis* jug may even be made by the same hand as the *Ammoudhia* potter. (Herscher & Fox 1993: 72). Herscher also noted the peculiar misshapen nature of the two bowls, possibly due to misfiring (Herscher & Fox 1993: 71). This also corresponds with bowls from the *Ammoudhia* sample; for example P15.14 (Fig.45, Plate X) which has an extremely warped rim.

MacLaurin argues that there are no Early-Middle Cypriot sites so far discovered in the Kryschou Bay area, so it is only the Paphos district that has yielded sites, such as those discussed here (MacLaurin 1980: 245), although a later short study of surveys in Western Cyprus by Maliszewski (1997) lists several Early, Middle and Late Cypriot settlements and tombs in the north west, particularly around the Polis area (Maliszewski 1997: 79-80). In fact Maliszewski recommends further investigation of this area as a potentially rich source of information in the understanding of Bronze Age spatial/chronological settlement patterns in Western Cyprus (Maliszewski 1997: 77). Unfortunately, many of the finds from the Paphos region were confiscated from local villages and are unprovenanced, but as MacLaurin notes, there are distinct similarities with the ceramics from *Ammoudhia* (MacLaurin 1980: 256). For example, she refers to a flask (Fig.100) found from the Paphos area which bears distinct similarities in form to the three flasks from *Ammoudhia* (P15.1, P15.10 and P16.16 – Figures 47, 48 & 84) although the decoration differs and it has two

zoomorphic heads (similar to P16.K and P16.L – Figures Plate XXI) instead of the typical ‘cotton reel’ lugs (MacLaurin 1980: 256).

The Canadian Paliapaphos survey also discovered several sites containing Bronze Age material including DPW (Fig.3). Sites inland in the Dhiarizos Valley show RPW as the most dominant ware, but with a large and constant amount of DPW at all sites (Rupp *et al.* 1993: 6). The DPW sherds found here do not seem to be restricted to certain shapes and occur in various guises including several open vessels, although the majority appear to be large storage vessels. No fine DPW sherds were found, although this could be due to poor preservation and the fact that this is a surface survey only. Decorations include the circle with enclosed dot and parallel lines typical of the west, as well as wavy lines, zigzags and hatching typical of the south coast and east. Rupp suggests that here we can see similarities with pottery both from Kissonerga and Episkopi, demonstrating connections with both areas (Rupp *et al.* 1993: 6).

From the evidence so far from the west coast, I would tentatively suggest that the sample from Kissonerga-*Ammoudhia* bears similarities in fabric and form with most sites published from the west coast. However, it would appear that the material here forms a uniform corpus of form and decoration that may represent a funerary repertoire or may agree with the hypothesis put by Hadjisavvas and MacLaurin of a localised *Ammoudhia* industry, particularly of small, fine decorated juglets. (MacLaurin 1980: 718).

### ***The South Coast***

The south coast of Cyprus shows evidence of inhabitation throughout the Bronze Age and the more recent excavations of sites such as Sotira-*Kaminoudhia* and Episkopi-*Phaneromeni* have greatly enhanced our understanding of the chronology of the period (Fig.3). The ceramics from this region appear very different to those of the North, which were previously used to date sites. In particular, there appears to be little or no WPW (previously the defining Middle Cypriot ware) at these sites, which meant that, like the west coast, for a time sites may have been misdated (Herscher



1981: 80). Evidence now strongly suggests that the south coast also had its own distinct regional style, with similar vessel shapes that are found islandwide, but displaying their own distinct decorations and fabrics of choice.

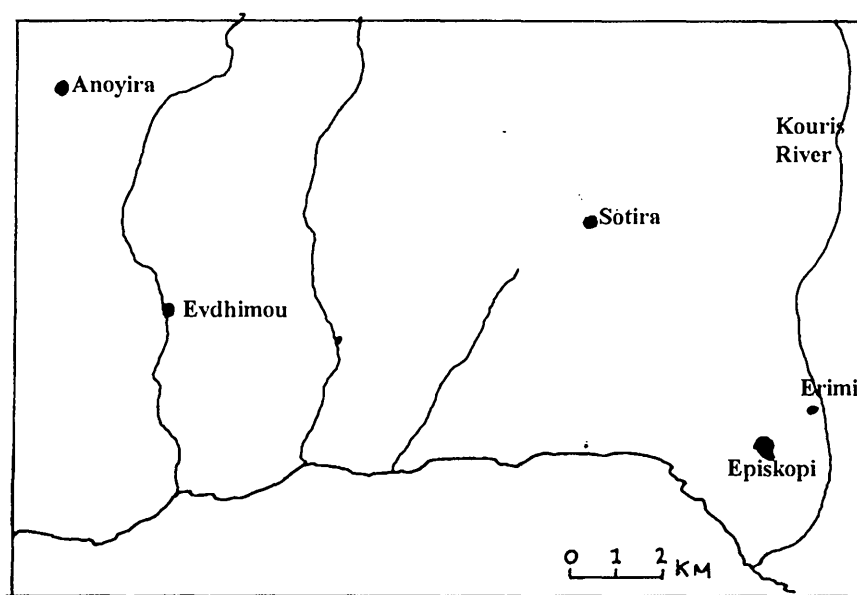


Figure 4: Map of Sotira survey area (adapted from Swiny 1981: 54).

The site of Episkopi *Phaneromeni* consists of a settlement and cemetery dating from the MC to LCI. It was first identified by Catling in the 1950s and was excavated in 1975 by Kent State University under James R. Carpenter. The majority of the ceramics at *Phaneromeni* occur in a form of RPW, mostly RP Mottled and RP Punctured (Plate XXIII). However, a significant amount of DPBC ware occurs, making up 8.4% of the entire assemblage (Carpenter 1981: 65). Whether this is a local production or an import from the west cannot be conclusively determined without petrographic analysis. However, it is *Phaneromeni* that shows the most similarities to the sample from *Ammoudhia*. This should not be altogether surprising as similarities between these two areas have been noted throughout Cypriot prehistory, the areas of Kissonerga and Erimi showing surprising uniformity of material culture in the preceding Chalcolithic period (Bolger *et al.* 2004: 121). This demonstrates that despite geographical obstacles, distance may not have been the defining factor we may have imagined. Graham Philip suggests that there are noticeable similarities between the ceramics of *Phaneromeni* and Kissonerga-Skalia

(Philip 1983: 53). This can also be seen when compared to the *Ammoudhia* sample. The fabric is hard fired with a blue grey core and pockmarked, but it would appear that whilst the fabric is the same the forms are different, being mainly functional and limited. Amphorae, jars and larger coarser vessels than the small fine juglets and pouring vessels found at *Ammoudhia* occur here (Herscher 1976: 11). Although storage vessels prevail, the decorations differ greatly from *Ammoudhia*, suggesting that this is a local production of DPW. The decorations employed for DPW at *Phaneromeni* appear to be simple if it occurs at all. Relief decorations of knob lugs and snakes are similar to those found at *Ammoudhia*. Incised decorations such as zigzags, short parallel strokes, 'tree' motifs and punctures, however, show a distinct local identity (MacLaurin 1980: 704). These lines of punctures are a common motif on DPBC here and can perhaps be paralleled with the rows of enclosed punctures around the necks of some of the small juglets at *Ammoudhia*. Sherd P15.G (Fig. 72, Plate XIII) is the only example showing unenclosed punctures. This RPW vessel appears to be a RPW body sherd from a small fine vessel and may well be a south coast import.

There is no evidence of west coast decorations or styles at *Phaneromeni*, apart from a vessel showing parallel lines enclosing dots from Tomb 24B (MacLaurin 1980:705) which also occurs in the south. There is evidence that there was contact and exchange of ideas. For example, flasks P15.1 (Fig.47, Plate VIII), P15.10 (Fig. 48, Plate IX) and P16.16 (Fig. 84, Plate XVI) from *Ammoudhia* show remarkable similarities in size and shape to flask 5 from *Phaneromeni* (Fig.49); the cotton reel lugs adapted into curving lugs, this also shows direct similarities with the zoomorphic flask from Paphos that is described by MacLaurin (Fig. 100). The possible Black Slip juglet (P15.9: Fig.55, Plate IX) also shows similarities and may in fact be an import, as the shape, handle attachment and fabric are much more reminiscent of a South Coast tradition, for example juglet 4 from *Phaneromeni* (Fig.102). Finally, similarities can also be seen in juglets P15.8 (Fig.54, Plate IX) and P15.13 (Fig.56, Plate X), the latter in typical *Ammoudhia* fabric and style. The decoration of vertical lines with emanating horizontal lines is reminiscent of the south coast 'tree' motif, however, and therefore this may be a west coast vessel

showing south coast influences. The former (P15.8) may indeed be an import, as the fabric is RPW and the decoration whilst still showing the traditional circle enclosing a dot is markedly different from the rest. In this case the dot is more of a dash and incisions of short parallel strokes suggest a south coast influence.

There are other sites in the region of Episkopi which have also yielded similar material, but most were looted and the material remains unprovenanced. However, it should be mentioned that from the site of Anoyira, DPW vessels were found with similar parallel lines and strokes as P15.8 and similar motifs were discovered on a cutaway spouted jug from Prastio-Avdemou, (MacLaurin 1980: 710) again suggesting that P15.8 is a South Coast import.

The site of Sotira-*Kaminoudhia* was excavated by Stuart Swiny over a number of years and the complete site report was published in 2003 (Swiny 2003), making it one of the few fully excavated, recorded and published sites of the period. It consists of a cemetery and settlement, dating mostly from the Early Bronze Age. Like *Phaneromeni* and other south coast sites the ceramics consist mainly of RPW, although there is some DPBC in evidence even at this early date and a fairly wide range of other fabrics too, although, like *Phaneromeni* and *Ammoudhia* the lack of WPW suggests a local industry. The DPW occurs only once in the cemetery in the form of a tankard with hard fabric and a burnished red slip, which is presumed to be an import from the south west (Herscher 2003: 152). From the settlement a number of sherds were discovered making 6 nearly complete vessels, one large jug, two juglets and three tankards. Decoration seems to be more common on DPW here than on RPW, the most common being impressed and relief bands and rows of punctures, as seen at *Phaneromeni*. Frankel and Webb note that there appears to be an unusual method of attaching the neck of DPW vessels, by placing the neck cylinder outside the body and perhaps the rows of punctures that are often seen on the lower neck are a means of obscuring the join (Frankel and Webb 1996: 157). However, from the broken vessels at *Ammoudhia* there is no evidence of this, although there are still motifs of lines of dots around the lower necks on several small juglets.

Although not from either of the sample tombs, there are two reconstructed vessels and sherds from Tomb 4 at *Ammoudhia* which should be mentioned here (Plate XXII). Their shape, fabric and decoration seem to correspond with the fabric Brown Polished Ware which appears at Sotira. Herscher describes these fabrics as appearing as almost black and were previously termed 'Black Polished' occurring almost exclusively as bottles with round bases (Herscher 2003: 193). P4.2 shows a slight reddening of colour near the rim and the decoration of deeply incised groups of lines suggests Red Polished South Coast Ware as the most probable definition (Delise Brewster, personal communication). This is solely based on photographic and written evidence so for the time being can only be a tentative suggestion. However, the double pierced rim and chevron shaped decorations are also synonymous with Brown Polished Ware as described by Herscher (Herscher 2003: 193). Thin-section analysis could go some way to resolving this issue.

Surveys conducted by Swiny in the area of Episkopi and Sotira have also yielded surface evidence of DPBC, which Swiny describes as very hard, with a buff to orange fabric and pockmarked, with incised decorations consisting of wavy bands and superimposed circles hanging from the shoulder or hanging triangles (Swiny 1981: 59). Because these are nearly all surface sherds it is very difficult to estimate vessel form. Some sites in particular show a great deal of DPBC sherds, and some settlements contain much more than the cemetery such as *Erimi-Kafkalla*, where the settlement contains 32% but the cemetery only 10%. All of the sites in the survey show RPW as the dominant ware apart from the cemetery at Mandra Tou Poppou where at 48% DPBC is the predominant fabric, possibly suggesting a centre of local production (Swiny 1981: 59). Because this material is surface collected sherdage, however, conclusions must wait until a further investigation of the area can be made.

Further east along the south coast from Sotira and Episkopi, another cluster of prehistoric sites existed around Kalavassos and the Vasilikos Valley. Excavated by Ian Todd in 1978, the Bronze Age Cemetery in Kalavassos village contained Middle Cypriot tombs, 13 of which were excavated. The ceramics appear to cover the entire MC period and show evidence of interaction between different regions of Cyprus

Cyprus (Todd 1986: 16). Like other sites on the south coast the main ware appears to be Red Polished Mottled, accounting for 65% of the entire assemblage. RPW altogether accounts for 86% of the entire assemblage with most jugs and small fine juglets occurring in this fabric. Only one DPBC vessel occurs, a jug, accounting for 0.5% and occurring in the same tomb (36) as the some of the only WPW, representing the work of north coast potters (Todd 1986: 155). Other examples show clear evidence of exchange with the east of the island (Todd 1986: 155). Todd also suggests that Kalavassos shows the most affinity with other southern and some central sites, such as *Alambra-Mouttes* further north and *Episkopi-Phaneromeni* to the west (Todd 1986: 156).

The Vasilikos Valley project has discovered many sites in the area through survey and the surface scatter and rescue excavations indicate a situation similar to that seen further west. A localised tradition of pottery design existed, mainly using a form of RPW, but with several other wares evident, including isolated examples of DPBC. The shapes tend to be the same, suggesting similar functions, with the majority of vessels being bowls, amphorae, jugs and juglets, but with different fabrics and decoration (Todd 1986: 155). Details such as handle placement (on small fine juglets most other locations seem to favour midneck placement) and bases (flat is favoured in the south) also suggest a local tradition. Perhaps owing to its more centralised location this area shows more interaction between different areas, as we now encounter clear evidence of contact with the north and east. It is possible in the Vasilikos Valley area that we have a pattern forming of local communities of potters, each with their own traditions, but who are in communication with other areas and exchange goods and ideas.

### ***The Central Plain***

The Central Plain has been known for some time to be home to Bronze Age sites and much of the looted material from the past decades is thought to have come from Marki. Excavations at *Marki-Alonia* and *Alambra-Mouttes* have recently both been well published. It would appear that again here we have dominant RPW, with DPBC occurring in small amounts.

The MC settlement of *Alambra-Moutes* was excavated by John E. Coleman and Cornell University between 1974 and 1985 and was published in 1996. The pottery consists of 99% RPW, usually a soft fabric with small bowls being the dominant shape, followed by jugs and juglets. A number of small fine juglets similar in shape to *Ammoudhia* were found in tombs, but altogether there appears to be little or no difference in the cemetery repertoire to the settlement (Coleman *et al* 1996: 266). Juglets with round spouts are also common, varying in shape from 8cm to 27cm, with handle attachments at midneck and round bases, they are undecorated and share little or no similarities with the sample material, apart from the possible import P15.8. The decorations at Alambra consist mainly of parallel lines and zigzags, triangles, and hatching and are identified by being extremely lustrous.

The DPBC found here is typical in that it is characterised by its hardness, grey pitted surface and sometimes what appears to be rather careless workmanship. It occurs in random sherds in the settlement and would appear to constitute a durable household pottery, quickly made and carelessly decorated. In the cemetery two jug fragments were found with punctures on the neck, reminiscent of the south coast pottery, particularly that from *Phaneromeni*. A body sherd with the classic parallel lines framing a row of dots may equally be west or south west in origin, but would not appear to be local in either fabric or decoration. There are one or two tenuous links to other sites, for example Kalavassos (Coleman *et al.* 1996: 264), but the most substantial connections appear to be through the small amount of WPW which can be paralleled in Dhenia (Coleman *et al.* 1996: 264). So it would appear that here we again have a local RPW tradition with homogenous shapes and independent decoration and a few fabrics and decorations that point to tenuous contact with other parts of the island.

The important E-MC town of *Marki-Alonia* was excavated between 1990-94 by Frankel and Webb and Latrobe University and was published in 1996. The pottery once again is dominated by RPW, over 90% being a variation on this fabric, but with occurrences of WPW, BP and DPBC. The broadly common functional tradition of

shapes is apparent here, with small bowls being the predominant shape during the EC (55% with jugs and juglets following at 29%). However, during the MC period jugs and juglets take over, being the dominant shape (45% with bowls falling to 38%) (Webb 1992: 89). It appears that only 1.1% of these vessels were decorated and more decoration occurs in later periods and on mostly closed vessels. However, 611 individual incised motifs have been collated, showing a diverse repertoire. Single or sets of lines are most common, as are zigzags. Horizontal lines enclosing punctures or dashes also occur, showing similarities to *Phaneromeni* and *Ammoudhia*. Small gourd juglets occur but are of a soft RPW fabric and are highly decorated, with concentric circles, hatched lozenges and multiple zigzags. These may not have been made locally as they show similarities to the northern tradition of Lapithos and Vounous (Frankel & Webb 1996: 135).

The DPBC from Marki is important as it is one of the few sites where it has been discovered in context and there is enough to be studied. Although only consisting of 0.1% of the entire ceramic assemblage, this still consists of 105 sherds representing a minimum of 50 vessels. (Frankel and Webb 1996: 155) The fabric is typical DPBC, similar to that of the south west (Frankel and Webb 1996: 156) and it occurs in a limited range of shapes, such as small bowls similar to those at *Skalia* (Frankel and Webb 1996: 157), although the majority are closed vessels, juglets and beak spouted amphorae, again suggesting a storage function. Small round-mouthed narrow-necked juglets are the predominant shape in this fabric, and several were found in tombs, so here we have a distinct similarity to *Ammoudhia* and Frankel even suggests that the DPBC found here are probably imports from the south west. The decorations on the DPBC consist mainly of relief cordons and zigzags but also enclosed lines of dots and circles with central dots, similar to the *Ammoudhia* tradition (Frankel and Webb 1996: 156). The dating of the DPBC at Marki is suggestive of an ECIII date lasting right through to LCIA, and since it would appear almost certain that this was imported for its contents from the south west this seems to back up the earlier date from Sotira *Kaminoudhia* and Episkopi *Phaneromeni* and is therefore suggestive of an earlier date for *Ammoudhia*.

Dhenia is another site on the central plain which has yielded a small amount of DPBC. A couple of rescue excavated tombs show 8 examples of DPBC all in jug form occurring in one of the richest tombs found there (Tomb 48). The pottery here shows great variation in MC wares but the DPBW shows mostly midneck handles with both round and flat bases, the only decoration being incised wavy lines.

### *The North and East*

The northern sites of Vounous and Lapithos were both excavated in the 1930s by the Swedish Cyprus Expedition and form the basis for the chronology and ceramic identification as set by Åstrom. Vounous being an EC site, the dominant fabric is RPW and for many years the definitions set by Åstrom were used to categorise RPW found all over Cyprus. Enkomi in the east is a predominantly LC site but also shows evidence of an MC occupation, the pottery being mostly WPW. However, since the Turkish invasion of 1974 excavations in the north ceased and exploration of the south and west began in earnest. Sites such as *Phaneromeni* show the previously unforeseen extreme regionality of Cypriot pottery trends at this period, and since the excavation of this site it has been recognised that a new method of categorisation is needed.

It can be said that these sites share the same general vessel shapes indicating similar habits to the rest of the island and evidence of exchange with the central plain and south has been attested at various sites. However, no DPBC occurs at any of these sites and there is also no evidence so far discovered in the west that suggests any contact with these regions. Therefore for the purposes of this investigation I have refrained from comparisons with the North and East.

From the evidence from other sites (both cemetery and settlement) it is possible to perceive a pattern regarding the use of DPW in Bronze Age Cyprus. All of the sites examined show a form of RPW as the dominant ware, usually with small bowls as the dominant form, with jug/lets the next most frequent. When DPW is found it is predominantly in the form of larger, coarser every day ware and mostly in the form of closed or storage vessels, mostly jugs, suggesting it was traded or exchanged for



its liquid contents. Herscher suggests that each type of vessel has a distinct uniform shape and decoration which may have served as a recognisable trademark for its source and contents (Herscher 1991: 48).

DPW in the south west shows, like the RPW, predominantly local traditions of form and decoration, such as flat bases and punctures. Further east the DPW still shows these similar motifs, strongly suggesting that as thought (Morris 1985: 25) this is an exclusively south-western fabric. Why the inhabitants of this area should choose to have their own fabric and not adopt the more universal RPW and WPW is open to conjecture. It may be said that the evidence from Kissonerga-*Ammoudhia* supports the evidence from *Pharenomeni* and the south that Early-Middle Bronze Age Cyprus, whilst sharing similar customs and material culture held extremely localised traditions of iconography and design, which remain visible in the archaeological record.

### **Kissonerga-*Ammoudhia* ceramics**

The assemblage from Kissonerga-*Ammoudhia* consists of an extremely important selection of vessels which, when a fuller analysis is achieved, will undoubtedly be significant for future studies into pottery technology, inter-regional relations and the potential trajectories to urbanism in the Middle Cypriot. From the four tombs sampled (which were chosen as representative of the entire assemblage) it is clear that this assemblage is (so far) unique. The entire assemblage consists mainly of two fabrics – Red Polished and Drab Polished Ware. However, other fabrics are also present in small quantities, namely what appears to be Brown Polished Ware and Black Slip Ware.

### ***Wares***

By far the most common fabric in the *Ammoudhia* assemblage is DPW. Drab Polished was first described by Åström in 1957 and was further studied by Herscher who made the distinction of Drab Polished Blue Core Ware (Herscher 1976: 13). This is a hard fabric fired at high temperatures for a short time. It usually has a

buff/yellowish fabric and a distinctive blue core. In many of the samples from *Ammoudhia* the core is so dominant that it obscures the colour of the fabric. Most of the Drab Polished vessels have a thin slip, usually in a yellowish/red and several contain distinctive mottling. It would appear that DPW is a distinctly west coast tradition, as it appears in far greater amounts in this area than anywhere else in Cyprus. Graham Phillip refers to the ware as the local RPW, (Phillip 1983: 48) as it is similar in fabric if not in firing and occurs in similar shapes and functions. However, Herscher argues that it is not just a regional variation but a distinct ware, with its own fabric, shapes and decorations. (Herscher & Fox 1993: 71) Although only a sample, it is worth noting that in the tombs so far studied DPBC accounts for the vast majority; in tomb 5 it accounts for 82% of vessels, RP Coarseware accounting for the remaining 18%. In tomb 15 DPBC accounts for 71%, RPW stands at 26%, whilst one vessel (3%) appears to be Black Slip Ware, and there is no Coarseware present in this tomb. Tombs 10 and 16 show a slightly more representative assemblage with tomb 10 consisting of 57% DPBC and 43% RPW, 14% of which is Coarseware. Tomb 16 contains 65% DPBC and 35% RPW of which only 8% is Coarseware. Figure 5 illustrates how the fabrics from each tomb compare with an average so far.

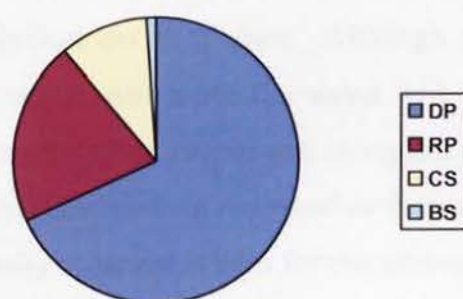


Figure 5: Pie Chart showing fabric ratio of Kissonerga-Ammoudhia sample

### **Forms**

There is a great degree of standardisation in the forms of the vessels recovered from the tombs studied and, it would appear, in the entire assemblage. By far the most common form is the pouring vessel, usually in the form of a jug but occasionally

flasks occur. These vessels in this sample seem to follow strict traditions according to size and shape, making it easy to split them into 3 categories:

1. Larger jugs, over 25 cm tall with round spouts and handles starting midneck .
1. Medium sized jug/lets between 15-27cm tall with cutaway spouts and high vertical handles.
2. Small fine juglets under 15 cm tall with round spouts. All have handles starting on the rim apart from P15.9 (Fig.55, Plate IX), P16.2 (Fig. 85, Plate XIV) and P16.14 (Fig. 88, Plate XVI).

The majority of jug/lets have vertical handles; some being rather high (see classification descriptions: Appendix Three, page 123). In a few cases of incomplete vessels the handles are missing but the attachment remains so it is possible to judge the handle shape. All of the jugs/juglets with vertical handles had the lower part of the handle thrust through the body, which is typical of the period. Symmetry and perfection was not uppermost in the potter's mind and indeed several of these vessels are what we would term as badly made with many out of alignment with the rest of the vessel.

Small bowls are also numerous in the assemblage, these are also uniform, hemispherical but misshapen. Although most are plain and unadorned there are a small number which are decorated with a variety of motifs, from appliqués and plastic zoomorphic shapes and elongated incised lugs to typical incision motifs on the body. The bowls at *Ammoudhia* demonstrate a wider variety of handle types than is normally observed at sites for this period.

Nearly all of the vessels have rounded or knob-like bases. There is one instance of a flat base in a sherd from Tomb 5 (P5.A: Fig.21, Plate III) and three ring based bowls, one from Tomb 10 and two from Tomb 16, all of which appear to be vessels of some significance, with zoomorphic relief decoration. The rest are all rounded for bowls whilst the larger juglets and jugs have quite obvious pointed knobs the smaller fine juglets are more rounded with a very slight pointedness visible.

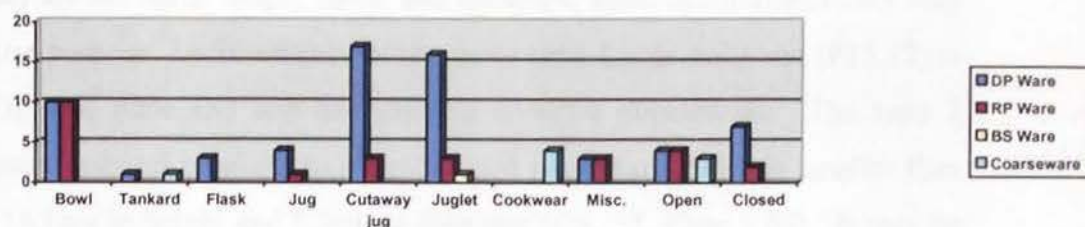


Figure 6: Graph showing % ratio of vessel forms present in *Ammoudhia* sample and the fabrics in which they occur.

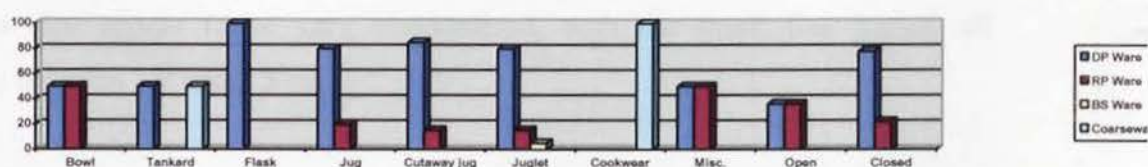


Figure 7: Graph showing % form to fabric ratio

### *Tomb assemblages*

Tomb 5 has a drinking vessel like a tankard (P5.1: Fig. 13, Plate I), a bowl (P5. 6: Fig.18, Plate II) and the bottom of a RP tripod cooking pot (P5.B: Fig. 22, Plate III), four of jug type 1 and one small juglet (type 3).

Tomb 10 demonstrates an equal amount of bowls and jug/lets, with six bowls one of which (P10.4: Fig. 27, Plate IV) has a ring base and unusual zoomorphic relief suggestive of a cult vessel. The three juglets are of the small, round spouted type (type 3), whilst of the three larger jugs one is round spouted storage (type 1) and the other two are cutaway spouted pouring vessels (type 2). Unlike the rest of the assemblage none of the juglets are decorated in any way apart from P10.9 (Fig. 33, Plate VI) which has a grooved handle and P10.6 (Fig. 31, Plate V) which has a relief decoration again only on the handle.

Tomb 15 shows an even larger preponderance of jugs and/or juglets, with two bowls and two flasks (which may be considered similar to the small, fine round spouted



juglets as they are the same shape, fabric and show the same decorations) they may serve a similar purpose. Unfortunately of the three type 1 jugs only one (P15.12) is complete (Fig. 65, Plate IX) and can give us accurate dimensions. The type 2 cutaway spouted jugs all conform to a similar size and ratio. P15.2 is smaller than the norm at 16.1cm in height and 8.5cm in diameter (Fig. 58, Plate VIII). It may be noted however; that this smaller one is RPW, not DPW and as such may not be made by the same potters or follow the same criteria as the rest of the sample. The small type 3 juglets all seem to have a wider body in ratio to their height apart from the RPW example (P15.8: Fig.54, Plate IX) and the Black Slip (P15.9: Fig.55, Plate IX). Rim sizes also appear to be very standardised, with the small fine juglets all measuring between 1.9 and 2.3 cm.

Tomb 16 shows some stylistic differences to the other three tombs studied here. It contains a larger ceramic assemblage, with ten complete bowls, two of which have ring bases, not the usual round ones. Some of these bowls, such a P16.21 are also highly decorated with plastic zoomorphic representations (Fig.83 Plate XVII), snake relief (P16.12: Fig. 80, Plate XV) or the incised circles and parallel lines of dots that are usually only found on small fine juglets (P16.1, P16.5, P16.18, P16.22 and P16.24). Of these, only one is Drab Polished (P16.18). Seven type 3 juglets were found in this tomb, four of which are decorated and three of these are Drab Polished. Nine examples of type 2 jugs exist, all of these are Drab Polished and none contain any decoration apart from incised lines on handles. One (P16.26: Fig. 97, Plate XVIII) is Red Polished but this is a very different vessel, the only one in fact that comes with a pedestal, perhaps signifying an ornamental purpose. Also in this assemblage are found three examples of Coarse Ware, in the forms of two cooking jars and one ceramic tripod dish or brazier.

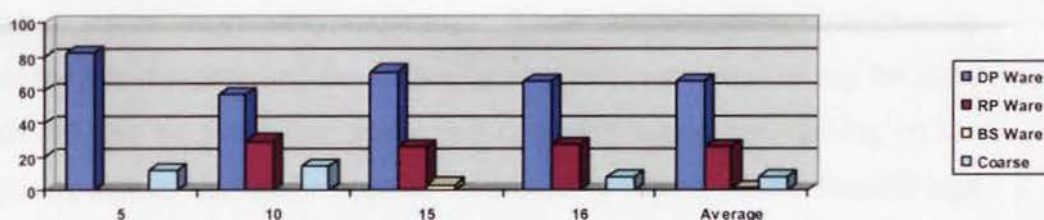


Figure 8: Graph showing fabric to tomb ratio at Kissonerga-Ammoudhia

## ***Decoration***

The majority of vessels are undecorated, although every jug/let appears to contain at least one form of decoration, usually a lug. The decoration at *Ammoudhia* consists of three main types:

1. **Relief decoration:** Although this is a common motif all over Cyprus in this period and a glance at some of the material from other tombs confirms that it is represented within the *Ammoudhia* assemblage, there is little decoration visible in the sample and what does appear is of a zoomorphic nature. Tomb 10 has two examples of relief decoration in the form of snake relief on the vessel body and zoomorphic lugs in what may be the form of a goat (P10.4: Fig. 27, Plate IV and P10.6: Fig. 31, Plate V). Tomb 16 has a very similar bowl (T16.12: Fig. 80, Plate XV) and another extravagantly decorated zoomorphic bowl (T16.21: Fig. 83, Plate XVII), as well as some rather appealing zoomorphic lug sherds which may belong to one of the vessels in the assemblage. There is also one body sherd from Tomb 5 (P5.C: Fig.23, Plate III) of a Drab Polished Ware closed vessel which has a little of what may be a snake.
2. **Lugs:** Lugs are extremely common in pottery of this period and this site is no exception. They come in a variety of different sizes, the flasks having extremely long 'cotton reel' shaped lugs which MacLaurin attributes particularly to the west coast (MacLaurin 1980: 719). By far the most common is the small nipple-like lug on the opposite side of the body to the base of the handle; every single jug/let in the sample has this appendage apart from the ones that are incomplete. These may still have had these lugs, but are missing. Less common are lugs on the handle side, although these do occur in six of the cutaway spout jugs. These features are entirely missing from the small juglets and the larger jugs are too incomplete to say for sure. It should also be noted that where two opposing lugs occur, the lug on the opposing side to the handle appears considerably more pointed. Conical lugs are the norm, although Tomb 16 again show some dissimilarities with

evidence of wishbone shaped handles and lugs, zoomorphic and highly decorated tablet lugs which appear only on bowls.

3. **Incised Decoration:** Incised decoration appears to be fairly common in this assemblage, with just under half the vessels showing evidence of incisions. Incised decoration is limited only to the small juglets, some small bowls and the two flasks, with none of the larger vessels being decorated at all, save one cutaway spouted jug (P15.17: Fig.61, Plate X) which has an incision in the handle. The decoration mainly consists of what may be termed as a typical west coast motif of impressed or incised circles with a central dot and either horizontal or vertical parallel lines enclosing a row of dots. All of these vessels only show decoration on particular areas. Unlike vessels from other regions which tend to be decorated all over the body, neck and handles, the bottom half of the vessels remain undecorated and the handles are generally undecorated in this sample, apart from three which have incisions. However, two of these three vessels can be termed as different from the main sample as they all show different decoration motifs and may prove to be imports from different regions (P15.8: Fig. 54: Plate IX & P15.13: Fig.56, Plate X). One vessel (P15.8) shows entirely different motifs and shape to the general trends, being RPW and elongated compared to the other juglets which tend to be rather squat. It has an incised handle and decoration which is more reminiscent of the south coast; although still displaying incised circles, the dot inside is more of a stroke, as are the dots enclosed in the parallel lines. This vessel also shows blocks of short strokes which are not represented in the rest of the sample. Vessel P15.13 is more similar to a west coast tradition, however, it too has a grooved handle and although it still has the circles and dots it also shows vertical lines with short horizontal lines coming off them. This again is not represented in the rest of the corpus, except interestingly on a lug sherd from the same tomb, which is the only decorated lug in the corpus. Like many incised RPW vessels there are several examples of white filling being used to enhance the incisions. This is often thought to be lime paste and is easily washed away (Washbourne 2000: 132) which may

explain why it does not appear on every vessel, although Barlow argues that, at least at Alambra, the white filling consists of a chalk paste mixed with carbonised bone (Barlow 1994: 46).

Although these traditional criteria of fabric, form and decoration are important in the classification, chronology and stylistic study of vessels, the aim of this thesis is to look beyond the traditional methods of stylistic analysis and examine conscious or unconscious stylistic choices made during the manufacturing process that may go some way to answering some of the as yet unanswered questions regarding society in the E-MC period. In particular, questions regarding the nature of pottery production and the true nature of the traditionally observed regionalism; does a study of technological choice show the distinct social regionalism suggested by decoration? Can clues to the nature of the move to urbanism be observed? I hope to show that an examination of technological choices can bring us closer to answering some of these tantalising questions.



## Chapter 3

### Style and Ceramics

What constitutes style and where does style reside? These questions have been the subject of much debate among archaeologists, anthropologists and ethnographers for decades. Although several different theoretical perspectives exist today, most archaeologists would agree a basic definition of style: Firstly that style is a means of doing something and secondly, style involves a choice (Hegmon 1992: 517-518). Despite this there still exist several divergent theories on the concept of style in archaeology. Style may constitute a means of communication; a purposeful injection conveying specific stylistic messages; a symbolic code reinforcing cultural boundaries or an unconscious means of conveying culturally inherited technological methods, to name a few.

Ceramics in particular have always proved a fruitful source for stylistic studies, both ethnographic and archaeological. The nature of pottery makes it especially useful for both transmitting and receiving stylistic messages. Pottery has many functions: it can constitute purely domestic vessels for every day use or vessels can also be used in a ritual context, representing the cognitive elements of the societies in which they function. Pottery is portable so can be used to transport commodities long distances (or it may be the pots themselves that are traded). In all of these, pottery can be a particularly suitable receptacle for stylistic variation. It is also extremely durable, surviving the passage of time better than many other examples of material culture, and therefore as one of the main sources of information for archaeologists, it can provide insights into social structure, social interaction and beliefs and rituals in past societies.

In this chapter I aim to discuss the concept of style with particular reference to ceramics. I will begin by giving a brief synopsis of the stylistic debate in archaeology; summarising the key concepts and protagonists. I will then go on to discuss the concept of style and how it can be applied to a study of Cypriot ceramics in particular, before discussing what theories may be usefully applied to the ceramics

from Kissonerga-Ammoudhia and how this may aid our understanding of this particular time and place. I shall then go into somewhat more detail on the manufacture of pottery and how an understanding of the underlying stylistic choices made during manufacture may provide important insights into the society in question.

### *Social Interaction Theory*

Style has been used as a tool in archaeology since the earliest years of the discipline. Recognising different styles of artefacts led to identifying cultures in time and space, leading to the culture-historical approach where vast typologies and chronologies of cultures were calculated on the basis of stylistic traits. During the 1960s and 70s 'ceramic sociology' aimed for a more empirical, analytical approach to explain stylistic variation. Fundamental to this approach was the social interaction theory, which assumes that stylistic traits are shared between culture groups in proportion to the frequency and amount of social contact (Plog 1983: 126). Also implicit in this theory is the notion that distance equals less interaction and therefore less stylistic similarity.

Contained within the social interaction theory are four major means of analysis, all of which are aimed primarily at ceramic decoration. Design element analysis involves studying isolated elements in a decoration and comparing them spatially to other ceramic designs. Like social interaction theory, the degree of similarity should reflect the degree of social interaction. Studies conducted by Plog, Deetz, Longacre and Braun utilised this means of analysis (Hegmon 1992: 530), however, certain assumptions were made (such as women were responsible for making pots) which may have skewed the results of these studies. Design attribute analysis examines variability in decoration motifs which were assumed to represent a set of choices made during the decoration process. This theory sees decorative motifs as conveying messages. Symmetry analysis was first proposed by Anna Shephard in her seminal work *Ceramics for the Archaeologist* (1956); however it took two decades for it to become popular. Shephard looked at style from an archaeological viewpoint and aimed to identify stylistic markers that could be used to evaluate and quantify style

consistently, particularly studying the symmetry of pottery decoration. Again, linked to the social interaction theory, symmetry analysis seeks to illustrate that similar social groups will use similar structural designs (Washburn 1983: 140). Finally, design structure analysis also focuses on structural and spatial elements of pottery decoration, but unlike design element analysis it focuses on the spatial relationship between design units rather than the units themselves (Rice 1987: 259). While this form of analysis is most suitable to modern ethnographic studies where information is available on local pottery decoration (Rice 1987: 264) it has also been used for archaeological studies, such as that conducted on Susa pottery by Hole (1984).

The danger of adopting any of these theories is that they may be imposing ethnographical classifications based on artificial data that was not meant by the artisan. What these theories fail to take into account is the fact that style may be used consciously or unconsciously as a means of communication, not only as a representation of a particular culture group. Sackett in particular has been vocal in his criticisms of ceramic sociology and what he terms the 'tyranny of decoration' (Sackett 1977: 376), where decoration is seen as a symbolic expression of the groups norms, without taking into account vessel form, manufacture or other pertinent areas of formal variation. However, ceramic sociology and interaction theory has proved a rich foundation for further stylistic studies and even Sackett agrees that it provided a powerful instrument for making ethnic discriminations (Sackett 1977: 379).

### ***Wobst & Information Exchange Theory***

In 1977 Martin Wobst suggested that the study of style was stuck in 'processual isolation' (Wobst 1977: 321). He argued that the stylistic analyses reviewed above either treated style as a negative category or as one that is 'unmanageably multidimensional' (Wobst 1977: 321). His proposed information exchange theory has since formed the basis for much of the past 20 year's stylistic studies.

Wobst defines style as "that part of the formal variability in material culture that can be related to the participation of artifacts in processes of information exchange" (Wobst 1977: 321). His theory proposes that stylistic behaviour has a function; to

communicate information. It includes any communication that is emitted or received, although reception need not occur and the emitter and receiver may be separated by time and space (Wobst 1977: 321). This theory implicitly assumes that the injection of style, be it in costume, display or artefact decoration is purposeful, containing explicit messages. Wobst proposed that stylistic behaviour functioned to firstly make social interaction more predictable, providing information on participants often before actually meeting and therefore reducing stress (Wobst 1977: 327). Secondly style helps to constantly evaluate and maintain social differentiation and thirdly it helps to illustrate and maintain boundaries (Wobst 1977: 328). Wobst calculates that style is most effectively communicated to those who are not within speaking distance, rather those who are socially distant but still able to decode the message (Wobst 1977: 324). He therefore suggests that artefacts that are highly visible and able to enter information exchanges with a potentially high number of individuals are more appropriate for stylistic messaging (pots being a prime example).

Pierre Lemonnier describes Wobst's study of information exchange in Yugoslavian folk costumes as 'representative of the best analyses of the informational content of material culture...' (Lemonnier 1992: 91). Wobst's study was an influential addition to the study of style which laid a good foundation for further research (David & Kramer 2001: 183) however, some of his proposals have been criticised. For example, Wobst sees style as active and intentional (what Sackett describes as iconological) not accounting for style that may be unconscious and passive. His approach also does not take into account that style may be capable of conveying complex information with several meanings rather than the simple direct messaging that he suggests. Finally, information exchange theory emphasises the use of style bearing artefacts, whilst ignoring the manufacture, production and life span of said artefacts (Hegmon 1992: 521) which was to become a feature of later studies.

### ***Sackett & Isochrestic Variation***

As stated above James Sackett was a critic of the ceramic sociology proposed by processual archaeologists. Sackett suggested that ceramic sociology falsely suggests

that style represented conscious symbolic behaviour by artisans and criticised the focus on ceramic decoration (the tyranny of decoration) as the only residence of style. Sackett defined style as 'a highly specific and characteristic manner of doing something...always peculiar to a specific time and place' (Sackett 1977: 370). He argued that style could not be regarded without function and, disagreeing with the inherent dualism in archaeology which regarded style and function as two separate things, he advocated that the two should be examined together and indeed, that style could be termed as 'function writ small' (Sackett 1990: 38).

One of Sackett's main concerns was the question of where, in formal variation, does style reside. Sackett argued that style did not just reside in adjunct decorative forms but potentially in all aspects of production and manufacture, from the raw materials used to means of production. Sackett questioned why artisans choose one specific method of doing things over any number of functionally equivalent methods (Sackett 1982: 72). He considered that these choices were dictated by the group's technological traditions and were therefore socially bounded; as such these choices may be diagnostic of ethnicity (Sackett 1990: 35). To explain these phenomena Sackett coined the phrase *isochrestic variation*, literally "equivalent in use". Sackett therefore saw style as ubiquitous, existing "wherever artisans belonging to a given ethnic group make specific and consistent choices among the isochrestic options open to them." (Sackett 1986: 268).

Sackett suggested that making isochrestic decisions was mostly unconscious and therefore any stylistic messages contained in an artefact constituted passive style, that ethnic symbolism could and did occur as artefacts are created in socially bounded contexts (Irving 2004: 175). He did not, however, presume that these messages were all actively sent, rather that they may not have been intentionally created but were latent qualities inherent in all formal variation (Sackett 1986: 630). Sackett suggested that this theory would be unattractive to ceramicists whom he perceived as being mostly concerned with decoration, his own area of expertise being Palaeolithic blades (Sackett 1990: 34). I would argue however, that isochrestism has much to offer ceramic studies, as shall be discussed further below. Isochrestism was

criticised in defining rather than explaining style, and Sackett himself admits that it is not a theory of stylistic behaviour and that indeed there is no pan-cultural explanation for style (Sackett 1986: 631). However, Sackett's model was designed for the purpose of archaeological research and as such offers an etic view of style as an investigation rather than a problem to be solved (Sackett 1982: 109).

### *Wiessner: Emblemic and Assertive Style*

Polly Wiessner conducted ethnographical and ethnoarchaeological studies among the Kalahari San in the 1970s. Like Wobst she proposes that style can be defined as "formal variation in material culture that transmits information about personal and social identity." (Wiessner 1983: 256). Although she disagrees with Wobst suggesting that style need not be simple and economic, rather it can be extravagant and ambiguous and, in fact ambiguity can have its advantages (David & Kramer 2001: 183). She also goes further in proposing that style conveys not only ethnic information but is an active tool in social strategies. She suggests two kinds of style: *emblemic*, that which has a distinct referent and conveys messages to target populations, usually regarding group affiliation and boundaries; and *assertive* style, which has no referent, being a personal expression usually conveying information relating to the individual (Wiessner 1983: 257). She also argued that style is founded upon cognitive processes of comparison which must be understood in developing a theory of style. (David & Kramer 2001: 188).

Whilst complimenting her quality of fieldwork Sackett questioned Wiessner's conceptualisation of style (Sackett 1985: 154); this triggered a series of exchanges as Sackett and Wiessner argued and reformed their own statements. Sackett does not entirely reject the iconological approach taken by Wiessner and Wiessner herself recognises that there are some elements of stylistic analysis that are best explained from an isochrestic viewpoint. This frank and public exchange of ideas did much to clarify the differences between the two points of view and went some way to questioning the existing evolutionary framework of stylistic theory, suggesting that each method may present a feasible contribution to discussions about style (Irving 2004: 178).

### *Ian Hodder*

During the 1980s developments in social theory meant that archaeologists re-evaluated their ideas towards past human society, including their material culture. It was suggested that artistic designs and patterns on material culture were mirrored in social structure and several studies were conducted under this banner. Arnold (1983) saw structural patterns in Peruvian Quinoa pottery that was mirrored in the spatial structure of their society. Like Wiessner, Ian Hodder's research was based on contemporary ethnographic studies. His research in the 1970s studied material culture among tribes in northern Kenya, which made him suggest that symbols were actively involved in social strategies and thus could be manipulated to mask, emphasise or contradict information flow or social relationships (Hodder 1982: 228). Whilst eschewing the classical structuralism of Saussure or Levi-Strauss as unable to explain historical contexts or human agency, he nevertheless suggested that structuralist concepts could help in stylistic analysis of material culture. Hodder agrees that style is very close to structure and symbolic aspects of style may relate to the operation of society. Like Sackett he argues that style and function must be taken together to ensure a coherent social and cultural theory (Hodder 1987: 4), although he does not agree that style is the choice made between functional equivalents, rather that in archaeology style is largely a spatial construct (Hodder 1990: 45). Hodder also argued that style is the pattern made around an event and that meaning can and will change with context (Hodder 1990: 45). Hodder's interpretation of style therefore suggests infinite interpretations and therefore it must be acknowledged that style has multiple meanings and therefore there can never be an easy single all embracing theory on style.

Hodder is still one of the foremost voices in archaeology and his influence cannot be underestimated. Although he pays little attention to manufacture and production he is one of the first to actively include the role of women. His ideas have advanced our understanding and stimulated others to follow his approach such as Shanks and Tilley or David, Sterner and Gavua's ethnographic study of pottery decoration in Cameroon (David *et al.* 1988). In this study the authors acknowledge that theirs is an

incomplete analysis since they are dealing primarily with pottery decoration (David *et al.* 1988: 365). Hole's 1984 analysis of Susa ceramics follows an explicitly structuralist approach, which he states in the title *Analysis of Structure and Design in Prehistoric Ceramics*. This study is interesting as it is not conducted on modern ethnographic subjects, but on Near Eastern prehistoric ceramics. Although again primarily a decorative analysis Hole nods to the need for examining pottery manufacture and technology and does include non decorative elements such as height and rim ratios in his study. He aims to find underlying structure rather than superficial similarities/differences (Hole 1984: 330) and he acknowledges what sounds like basic isochrestism when he says that pottery making is socially transmitted, much of which is subconscious (Hole 1984: 330).

### ***Lemonnier & Anthropology of Technology***

Although an anthropologist, Pierre Lemonnier's work on the anthropology of technology has been highly influential among archaeologists in recent years. He criticises Hodder and the Cambridge School for looking only at the shape and decoration of artefacts, arguing that there are 'entire sets of social phenomena related to the making and use of such items of material culture' (Lemonnier 1992: 97). His (and others) work has led to further increase in our understanding of the concept of style. Like Sackett he argues strongly that there can be no style without function and although he finds the isochrestism an interesting approach for an anthropology of technology he finds the use Sackett makes of it disappointing (Lemonnier 1992:90). Lemonnier asks the question 'what is the social context of technological choice?' and seeks to explain this through not just the artefacts themselves but the operational sequences (*châînes opératoire*) of choices and decisions that were made during the production. He characterises techniques as socialised actions in matter, involving implements, procedures and knowledge, those can then be compared to events in a similar sequence (Lemonnier 1992: 36). Working in a *châînes opératoire* framework means trying to reconstruct past manufacture processes, a problematic but rewarding approach in recent years. This not only requires a rigorous methodology but a sound theoretical understanding of the nature and role of technology in past societies (Schlangar 2005: 25).



Putting technological activities into a stylistic context allows archaeologists to see that style does not occur only in the decoration or form of an artefact but in the very process of manufacture/production, and therefore style can be seen in tools and raw materials as well as artisans knowledge skills, values and the symbolic representations implicated in the production and reconstruction of everyday life (Schlangar 2005: 29).

More recent ceramic studies have concentrated on technology and manufacture of pottery both in Europe and the Americas. For example, the Leiden School in Europe has recently provided ethnographic and archaeological information on technological changes in pottery and cultural changes, for example Loney's study of ceramic manufacturing techniques in Bronze Age Italy (1995). Van der Leeuw in particular has worked for several years on the variables involved in any study of pottery (Loney 2000: 651) and has more recently been working in collaboration with Pierre Lemonnier on cultural explanations for technological change and innovation (Loney 2000: 652). The issue of technical choice has also been more prevalent in the USA in recent years with scholars such as Longacre, Schiffer and Skibo tackling the issue from an ethnoarchaeological perspective. Schiffer argues however, that these ideas differ from *châînes opératoire* as they include all activities related to the life cycle of an artefact, not just the operational sequences of manufacture (Schiffer *et al* 2001: 731). These behavioural studies also attempt to clarify the relationships involved in technological choices, materials and performance characteristics (Schiffer *et al* 2001: 731).

Many of the examples quoted above are the result of modern ethnographic studies rather than prehistoric studies. Ceramic ethnoarchaeology seeks to 'focus on studies which explicitly consider contemporary pots and potters in terms of particular problems in archaeology' (Kramer 1985: 77). Studies such as those conducted by Wiessner or Hodder show how rigorous anthropological study can give valuable insights into the concept of style or ethnicity and as such can be extremely valuable in applying these concepts to archaeology, since archaeology is nothing more than

anthropology in the past. However, there is always an ethnocentric danger in applying modern information to unknowable past cultures, as Plog wisely warns “ethnoarchaeological studies are not recipes to be followed through” (Plog 1980: 3).

To conclude, these are only some of the contributors to the ongoing debate on style, many others have contributed ideas and have practiced the various frameworks in both ethnographical and archaeological studies. The way things stand at present it is widely acknowledged (and stated above) that there is no superior individual approach and there will never be a simple unifying style theory with set rules and that different stylistic investigations will require different perspectives and that this multi dimensional approach helps to foster a tolerance of opposing viewpoints (Hegmon 1992: 531). There is no reason why more than one method of stylistic evaluation cannot be used in one study if different approaches can enhance understanding of the particular issue.

Since ceramic analysis can provide us with a record of the choices made by the potters during the manufacturing process an analysis of these choices should give valuable insights into the potter’s environment, both natural and social. A stylistic analysis should therefore provide information on social interaction, social structure, economy (trade and exchange, both for pots themselves and their contents), and funerary customs and can also provide often vaguer information on cognitive processes, ritual and belief.

### **Stylistic analyses in Early-Middle Cypriot ceramics**

There have been several studies on Early-Middle Cypriot ceramics over the years (Stewart, 1962; Åstrom 1972; Merrillees 1978; MacLaurin 1980; Philip 1983; Herscher 1976, 1981, 1991; Frankel 1974, 1977, 1981, 1988, 1994). However, by far the majority have been typological studies in an effort to clarify wares and chronologies. Because there are so few excavated sites from this period attention has been concentrated in putting sites into context within the spatial and temporal landscape. The studies conducted outside of the typological arena have again mainly

been concentrated in a social interaction sphere, in attempts to place sites into a chronological context and gain insights into social interaction between groups. As so few sites have been properly excavated, the majority being small scatters found on surveys, much work has concentrated on placing these small little known sites into an accepted context. Typology in this case is extremely important as it is almost solely pottery that forms the chronology for the period. Also, the more recent excavations have proved that Cypriot ceramics of this time were considerably more regionalised than was originally thought, so the original chronology and typology based on Red Polished Ware in particular from Vounous and Lapithos has had to be much reviewed and added to as new wares and subwares are discovered and it is now understood that the numerical categories of RPI, II, III and IV suggest a simple chronological connection which does not necessarily exist (Barlow 1989: 56). This has led to one of the most complex ceramic sequences in archaeology and it is no wonder that the majority of studies have been intent on clarifying the typologies rather than in depth studies of style.

The few studies that have involved style again are mostly concerned with social structure and interaction and like the ceramic sociologists of the 1960s are heavy on the decorative analysis at the expense of manufacturing techniques. However, even when explicitly based on decoration there is almost always an implicit question of manufacturing techniques and the choices made without them ever being tackled explicitly.

One of the few studies to take a technological if not isochrestic view is that conducted by Jane Barlow (1989) on Red Polished Ware from *Alambra-Mouttes*. In an attempt to gain a clearer understanding of the myriad categories of Red Polished Ware she conducted thin-section and chemical analysis on a selection of sherds. She discovered that two fundamentally different types of clay were used, one sedimentary and one igneous which appear to be used for specific vessels (Barlow 1989: 55). Barlow also discovered that, microscopically, early White Painted Ware is almost identical in composition to the finer Red Polished Ware, which she termed RPA (Barlow 1989: 56). A later study also showed that Black Polished Ware is also

technologically nearly identical to RPA but is fired in a reducing atmosphere to give its black colour (Barlow 1994: 45). These studies showed that at least at Alambra and its environs pottery making techniques were almost homogenous with the potters making clear choices at different points in the manufacturing process (surface treatment for WPW, firing for BPW) to achieve the vastly different aesthetic. Although not intended to be a predominantly stylistic study Barlow's analyses clearly illustrates the isochrestic choices made by the Alambra potters. However, when the tests failed to work on pottery from Marki this approach was discontinued.

Ellen Herscher is one of the foremost experts on prehistoric Bronze Age pottery and has been responsible for much of the studies and publications in recent years as well as being responsible for recording and analysing the ceramics from recent excavations such as *Sotira-Khaminoudhia* (Swiny, Rapp & Herscher 2003). Her studies in Southern Cyprus have led her to suggest that style here in the Early-Middle Cypriot was technologically conservative, the norm being to improve on existing techniques rather than adopting new ones, as can be seen for example in the absence of White Polished Ware in the region, the answer to which she suggests, lies in the realm of the political and sociological (Herscher 1981: 15). With the information from Barlow (1989) that WPW is manufactured in the same way as RPW, a stylistic analysis comparing these fabrics and the different stylistic choices made could be extremely enlightening.

By far the most prolific author of stylistic evaluations on Cypriot prehistoric Bronze Age pottery is David Frankel. Over the past 30 years he has pursued various questions regarding the societies of the period and has used various different methods of stylistic analysis to seek answers regarding technology, pottery production, social structure and social interaction. One of his earliest studies (1977) dealt explicitly with decoration on White Painted Ware, a processual approach similar to design attribute analysis where he attempts to quantify the degrees of similarity between different groups by studying the proportional occurrence of decorative motifs (Frankel 1977: 149). From this study Frankel suggested that a general sharing of motifs between sites but with simpler styles predominant on the

east coast was suggestive of social interaction, possibly to do with the copper trade, which would explain more complex motifs inland near copper sites, whilst the coast was perhaps catering for Levantine trade (Frankel 1977: 154). Alternatively the similarities could be explained by women potters being exchanged in marriage and bringing their own cultural pottery making traditions with them (Frankel 1977:157).

An ongoing debate in Cypriot archaeology is that of the nature of prehistoric Bronze Age pottery production. Some scholars argue for a specialised industry, likely operated by males (Stewart 1962: 291-2); others for a more ad hoc domestic production operated by females (Frankel 1988: 29). Much of Frankel's later papers explore this issue and in most of his studies he uses an explicitly stylistic approach to argue for the latter. For example in one article he makes implicit assumptions of social organisation based on ceramic styles (Frankel 1988: 29) and argues that the question of production is more important than it may at first seem as any understanding of the variability of ceramic styles are affected by underlying, often implicit models of production used. It also carries implications for the structure of society and the interaction of said society (Frankel 1988: 29). In this study Frankel attempts to set up a model of diffusion to explain the transfer of technological skills and stylistic ideas. He still separates the two, stating that fabric is separate from style (Frankel 1988: 37) and therefore could be accused of still using the social interaction theory. He does, however, implicitly discuss technological choices and stylistic variation within the manufacturing process, explaining intra/inter site variability on the social aspects of production as mirrored in stylistic variation.

Frankel carries this issue further in a study of the material from Marki-Alonia, a Middle Cypriot town on the central plain. The excavation, which he co-directed with Jennifer Webb, remains one of the largest and best excavated sites of the period. It also is of importance as it is one of the few sites to include a settlement as well as a cemetery. In studying this material Frankel and Webb eschew a typological approach, favouring an attribute analysis. Here he looks at process of manufacture; temper, fabric, form, etc., to ascertain in what circumstances and by what mechanisms these skills and ideas are transferred. Frankel observes that although

fabric colours vary, this can be explained through raw materials or firing and that the similarity of surface colour and common technology suggests a shared aesthetic ideal maintained through regular contact (Frankel 1992: 69).

In a 1994 paper where he further questions the choices made by the potters during production, Frankel analyses the variation in colour specifically on Red Polished Ware from contemporary sites to establish the degree of standardisation achieved by ancient potters. In this study he moves away from solely decorative motifs to analyse colour as a stylistic example of formal variation (Frankel 1994: 205). He argues that although archaeologists record colour as a matter of course, it is rarely examined as a stylistic tool, although he does pay tribute to Barlow's earlier work mentioned above and suggests that Cypriot archaeology could benefit from more attempts to measure stylistic uniformity and manufacturing technique (Frankel 1994: 206-7). Like Barlow he also criticises the standing Red Polished Ware typology, noting that these impose an image of conformity which does not exist and obscures existing variability (Frankel 1994: 217). In this study Frankel noted that compared to Red Polished Ware, White Painted Ware appears to be far more uniform, with less colour variability and a highly consistent production control, with similar clay, firing conditions and technology over the island (Frankel 1994: 216). However, at least in this paper, he does not pursue the issue of White Painted Ware being non-existent in the south west and the implications that this may have for our understanding of Cypriot society at that time.

Frankel's recent paper (2000) with Jennifer Webb is not so much a stylistic analysis but an analysis of settlement size, structure and population patterns of pottery use, consumption, breakage and in particular discard. Through their findings at the Marki-Alonia settlement Frankel actually changes his mind about his previous arguments for a domestic female pottery industry. Analysis of the pottery and estimates of population and the life span of vessels suggests that so few vessels would be needed each year that rather than each household making their own vessels as it needs them, one or two specialised households were probably responsible for pottery production which was probably linked to kin groups with more uniformity

and less individual expression (Frankel & Webb 2000: 7), Frankel sees this as a more emblematic representation of style rather than the more assertive model he had previously advocated (Frankel & Webb 2000: 8).

As stated above, there is no one stylistic theory that is considered superior to any other and most can be used interchangeably outside their original area of study (Irving 2004: 202). However, it is clear that there is more to stylistic variation than typology and the study of decoration. In Cypriot Bronze Age archaeology ceramic production and technology have been studied by Frankel and Barlow in particular, but the nature of production and technology still remains on the periphery of most pottery analyses. The assemblage from *Ammoudhia* offers an opportunity to study a large corpus of pottery from a previously unexcavated geographical area. By using theoretical stylistic approaches, significant information regarding the society that made these pots may be forthcoming. The aim of this thesis therefore, is to study the evidence for the production and manufacture of these pots, examining the evidence for technological choices that the potters made in the vein of Sackett (1977) and Lemonnier (1992). Isochrestic variation in particular, seems particularly well suited to the aims of this study. An isochrestic approach means recognising each stage of the manufacturing process and the choices made at each stage. It can therefore illuminate the entire manufacturing process. Information gained on technology, choices made at other sites and the nature of exchange of not just pots, but technology and ideas may help answer those questions stated previously that remain largely unanswered, such as the nature of *Ammoudhia* society, the rise of urbanism, the degree of regionalism in Cyprus and may eventually help clarify the complex and confusing typology that has arisen in Early-Middle Cypriot ceramics..

### **Pottery manufacture and isochrestic choice**

In this section the practicalities of pottery manufacture will be discussed, outlining the various stages where isochrestic variation can be observed before discussing the specific choices made by the *Ammoudhia* potters in the next chapter.

Pottery is an additive technology (Rice 1987: 245), there are various steps taken in the manufacturing process that can influence each other and form the cumulative record of these choices. Rye (1981) defines the process of pottery manufacture, differentiating between those operations essential to the successful manufacture of a pottery vessel and those non-essentials, such as surface treatment. It would appear at first that the essential operations contain less opportunity for stylistic variation and isochrestic choice than the often purposefully visual non-essential element, however; this is not necessarily the case. As already discussed, just because a process is essential does not mean that independent choices are made by different potters from different cultures. It can also be argued that these choices, because they are made unconsciously are extremely valuable as being representative of the deepest values and traditions of a society.

Rye's essential operations, which are universal, consist of 7 stages:

1. Discover source of raw material. This will have fundamental consequences to the type of pottery produced. Clay is a fine grained earthy material that develops plasticity with water (Shephard 1956: 6). However, different clays have different compositions and react differently in firing, so the final product will depend very much on the clay chosen in this initial operation. However, it must also be remembered that this choice may be environmentally determined, as clay is often (although not always) used from local sources. In fact, it is well to remember that choices made in the pottery production sequence are often tied to the local environment (such as water sources and climate), as indeed prehistoric societies are themselves.
2. Choose the raw materials to be used. Rye defines the actual choice as an essential stage in the process. Clay is not the only raw material to be chosen though. Water, fuel for firing, temper, all must be chosen from an equally variable selection and it is in these isochrestic choices that style may be observed.
3. Extract and transport to site of manufacture. As stated above, most prehistoric ceramics are made by exploiting local clay sources, although this may still be some distance from the site of production.





4. Preparation. It is at this stage where many of the fundamental isochrestic choices are made in which we can observe formal variation. This is also a series of choices and processes, which may not even be performed by the same person, therefore since this study is predominantly interested in preparation and manufacture of ceramics, considerable detail will be paid to the aspects of preparation.

Firstly, this operation consists of preparing the clay, as clay must be plastic enough to form vessels but be able to harden and withstand firing temperatures (Rye 1981: 3). Tempering the clay is an important part of the process and is one of the technological aspects of ceramic manufacture that is visible to archaeologists and relatively easy to analyse. This is a non-plastic material which counteracts the shrinkage that occurs in pottery during drying and firing and thus reducing the risk of cracking (Shephard 1956: 25). A wide variety of materials can and are used to temper clay, thus making non-plastic inclusions an important part of the isochrestic selection process. Items that are used to temper clays include other types of rock from all three classes, sand, organic material such as grass, shell, silica and crushed up fragments of old pottery, known as grog. The potter would need to be aware of how different tempers react in the firing process, for example organic material often burns away to leave voids and these can help to reduce the effects of thermal shock in cooking vessels. Different tempers require different treatments, some needing to be ground, therefore requiring more labour (Shephard 1956: 26). It may be that temper was chosen from literally what was nearest to hand, however potters often show preference for one type of temper when any amount of alternative material may have been used.

Once the clay has been refined and temper added then the vessel can be shaped. The basic shape and function of the vessel will probably already been decided, but still a wide variety of choices can be made regarding base shape, handles, rim types, sizes and so on. The technique used to build the

vessel also represents isochrestic choices being made, whether wheel made, coil built or moulded by hand signify the particular style of the potters.

Once the vessels have been formed and dried they must be fired to insure destruction of the clay minerals. Shephard describes this as the “inevitable and relentless test to which the potter must subject the produce of her skill and patience.” (Shephard 1956: 74). The firing process involves several variables and choices which will produce drastically different results. Firstly, raw materials must be selected; where is the firing to take place? An open fire, pit, oven or kiln? What fuels are to be used and what methods will be used to control the heat? Firing is a chemical process, creating ceramics from clay and the choices made during the process can drastically affect the appearance and durability of the vessel. Firing usually takes place in either a reducing or oxidising atmosphere, depending on conditions. A reducing atmosphere dehydrates the clay, losing plasticity and increasing porosity (Shephard 1956: 20), whilst an oxidising atmosphere involves an actual chemical change, where impurities (usually carbon or iron compounds) react with oxygen. The temperature and rate of firing will decide the nature of these processes which can in turn define the colour, texture and hardness of the finished vessel. For example the blue core of Drab Polished Ware is a result of firing at extremely hot temperatures. Shephard argues that most prehistoric ceramics were made on open fires in oxidising atmospheres (Shephard 1956: 213). Using an open fire requires great skill and knowledge of the effects the firing process may have on the appearance of the finished vessels makes it a particularly interesting area of study of technological choice and style. Temperature and rate of firing can be controlled to some extent by the choice of fuel and positioning in the fire. Animal dung for example burns slowly, grass and twigs burn quickly, so the rate of firing and the temperature can be controlled. Where a vessel is placed in relation to the hotspots or drafts will also affect the firing process; all of this can be observed by archaeologists and can tell us what choices were made by the potters, regarding fuel, temperature and firing. The process of firing

therefore constitutes a complex technological process involving choices that have been made probably through wide experimentation and a knowledge of the outcomes of the different choices to achieve the desired results.

5. Once the vessel is fired it is ready for the next essential stage in Rye's process; distribution. Vessels are distributed to users, whether domestic in the same household or village or exported to neighbouring villages or further afield. The nature of distribution of pottery in Cyprus has already been discussed in relation to Frankel above and will be further discussed with regard to the *Ammoudhia* pottery styles in the next chapter. Of course, this aspect has much to do with the nature of social interaction as discussed above.
6. Use. Pottery can have a variety of functions. Much of this is dependent on form, for example a jug may be used for pouring or storage of liquids in many different contexts. The particular style of a vessel may in part dictate the uses that vessel is put to, for example it may be specific styles of manufacture that make some vessels peculiarly meaningful as cult vessels. The function of a vessel may also change over time and ownership. It is in this part of the process that we can observe what Sackett meant by style being 'function writ small'. However, it should be remembered that it is not solely in the function but in all the choices made during the production process that can be related to this.
7. Finally, Rye suggests that disposition is an essential part of the pottery making process. What happens to the material remains of a pot after use? Many are obviously discarded, complete or broken for various reasons; many are placed in tombs, taken out of circulation to be found by archaeologists. Pottery can also become part of a new process after use, crushed up as grog to make new pots, or crushed and used as fertiliser, archaeology can often answer some of these questions regarding the cultural life of pots.

These are the seven operations that Rye argues are essential to the pottery making process. These may differ from other ceramicists slightly but in essence constitute a widely agreed process. However, there are also the operations that he terms as non-

essential, which are often used enough to make us forget that they are not in fact essential. In particular in this area we find surface treatment such as application of a slip or glaze, decoration such as incision, painting or relief to name a few. These areas are capable of a wide differentiation and provide easily observable differences; so easily observable in fact, that as noted by Sackett and others, the stylistic variation observed in surface treatment has been widely analysed to the detriment of the essential operations. It is in these non-essential but highly visual areas that style may be most easily and superficially observed to reside and it may be here more than anywhere else that we see a purposeful injection of stylistic variation (either emblematic or assertive) by the potter. However, it is not just the decoration or colour of slip that can be analysed as a stylistic choice; the raw materials used such as the clay for the slip, rag or brush for application, paint, incision tools again represent distinct isochrestic choices made by the potter and can all be recognised by archaeologists to some degree. For example, the same clay can acquire very different colours depending on the choices made by the potter during preparation. The temper used, firing temperature and rate will influence this, as noted by Barlow above. Incision works best when the fabric is smooth and there are no large inclusions, in fact the quality of incision can be influenced by the texture and firmness of the fabric and the quality of the tools (Shephard 1956: 195). Again, this illustrates how style cannot be observed solely through decoration, but in all the interconnected choices that are made throughout the entire manufacturing process and that the nature of decoration itself is drastically influenced by the choices made at previous and future stages of the manufacturing process. It is also possible that these non-essential elements of pottery production are also the easiest to be influenced by outside sources. New styles and techniques of decoration may be practiced and adopted relatively easily. Essential operations however, may be more resistant to change, as presumably more experimentation would be required and, as discussed above, slight changes in choice to one aspect may drastically affect the entire process. However, potters work in a realm of interaction controlled by physical and chemical laws in a social and physical environment and within a framework of choices that must be re-evaluated constantly even by the most conservative artisan (Rye 1981: 26).

A couple of noteworthy points: As may be implied from above, the process of pottery manufacture is a time consuming and skilled operation and it is by no means a certainty that every stage was performed by one individual or group of individuals. I would argue that there is not enough evidence to assume that the collection of raw materials, preparation, firing, decoration and distribution were all the work of one person. This has repercussions on discussions on gender, age and also on other social aspects of pottery production: such as household/domestic versus industry and seasonality.

When examining and recording ceramics there are particular areas of a vessel that are recorded and used for typology and comparisons with other wares and vessels. These units of analysis, such as hardness, texture, colour, type range and size of inclusions are all evidence of technological choices and relationships, which once established can be analysed for technological and stylistic information. The greater the evidence for technological choices, the greater the potential for unravelling the complexities of stylistic behaviour (Rice 1987: 245).

## Chapter 4

### Isochrestic Variation in the *Ammoudhia* Assemblage

In this chapter the ceramics from *Ammoudhia* will be analysed using a specifically isochrestic approach as discussed in the previous chapter. Evidence for pottery production apparent in the assemblage will be examined and opportunities for isochrestic choice identified to ascertain what insights may be gained into the *Ammoudhia* society. As stated in the previous chapter, using an isochrestic approach on this material will mean studying parts of the manufacturing process not usually examined for stylistic choice, but where, Sackett argues, style still resides (Sackett 1977: 370).

It is through identifying these choices, where equivalents exists, that it is possible to observe isochrestic choice, which, rather than being a conscious and active choice sending out direct signals, is rather passive and unconscious, adapted through cultural tradition. By studying the *Ammoudhia* assemblage in this way it is hoped that some light will be shed on both the manufacturing process and tradition of the ceramics and on the choices made at *Ammoudhia* as compared to the choices made by potters at other contemporary sites in Cyprus, which in turn should give valuable insights into the *Ammoudhia* society and their relations with contemporary societies in other parts of Cyprus.

This chapter will analyse, stage by stage, the choices available to the *Ammoudhia* potters during the manufacturing process and what choices they actually made, using Rye's essential operations in the pottery making process.

#### Raw material

##### *Discovery and extraction*

Before discussing clay sources it is important to remember that it is as yet not known where these vessels were manufactured. It is extremely likely that they were made somewhere in the Kissonerga area, possibly *Skalia*, or another undiscovered site.

However, all that could be said until now is that the assemblage showed a large amount of south-western characteristics. These can be seen in the high percentage of DPBC, the form and shape of many of the vessels and the decorative motifs chosen from incised circles to elongated 'cotton reel' lugs. As stated previously, these are highly suggestive of a local origin, but until a production site is located this remains speculation. Experiments on clay and pottery in south-western Cyprus by King (1987) suggest that unlike Alambra, local areas of production in the south west exploited only one clay source for all their ceramic requirements (King 1987: 217).

There are clay sources in this vicinity of Kissonerga and indeed all over Western Cyprus (King 1987: 215). The area around the modern village of Kissonerga has been occupied continuously from the time of the earliest colonisation (*Kissonerga-Mylouthkia*) through the Neolithic and Chalcolithic to the Bronze Age. Although it is likely that the *Ammoudhia* potters exploited these clay beds, this cannot be proven conclusively without a microscopic analysis of the ceramics. Thin section analysis would be invaluable in this study; this involves grinding down sherds of pottery to 3 microns enabling light to pass through. When examined under a polarised microscope the clay matrix can be studied to show the microscopic make up of the clay, which can then be attributed to a geological area, confirming the origin of the clay. Thin section analysis can also determine the temper used as well as gauging the temperature and accelerants used in the firing process. Unfortunately thin section analysis is beyond the scope of this study, but the *Ammoudhia* material would certainly benefit from a microscopic analysis in future studies. Without thin section analysis it is also impossible to say for sure if only one type of clay is being used for all kinds of vessels or if, like at Alambra, different clay types are used for different functions (Barlow 1989: 55).

Water is also needed in abundance for the manufacture of pottery. Modern Kissonerga is certainly near water sources – the Agriokalami River is extremely close to the cemetery site and *Skalia* lies near the Skotinis river. Prehistoric fresh water sources remain largely unknown, although the site of *Kissonerga-Mylouthkia* has produced some of the oldest wells in Cyprus, suggesting that there are

underground water sources that may have been exploited. Again this remains speculation until further excavation of the area can be carried out and a manufacturing site identified.

Thus, the first three stages of pottery manufacture at *Ammoudhia* remain elusive. Without an excavated production site and geological identification of clay sources these can only be educated guesswork. However, it seems fair to speculate that the clay is likely to be from a local source and the vessels manufactured locally, but it is impossible at this stage to identify specific choices made at this stage by the *Ammoudhia* potters. The study would therefore benefit considerably from thin section analysis to clarify these issues.

## **Preparation**

### ***Temper***

The different stages of preparation within the pottery manufacturing process are where the isochrestic choices of the *Ammoudhia* potters can be most easily observed. After the clay has been extracted and transported to the preparation site, it is then mixed with some form of temper. This temper can be observed in pottery sherd sections, usually as different shapes sizes and colours of inclusions; organic temper often disappears during the firing process but can still be observed in the negative as voids – empty spaces in the matrix. As stated in the previous chapter many different types of temper can be used, often from everyday easily accessible materials, although sometimes it appears that prehistoric potters did not always select the most obvious materials, suggesting that there were more concerns than just ease of preparation (Shephard 1956: 54). Because there are many different materials that can be equally viable this is potentially a rich source for observing isochrestic choice. It is also a part of the manufacturing process that is invisible, unless the vessel is broken and is therefore unlikely to be carrying any purposeful stylistic messaging.

Using a 10x10 magnifying glass it is possible to observe the amount, shape, size and colour of inclusions and ratios and choices can be observed from these simple statistics. Again, a thin section analysis would yield considerably more information



being able to identify the mineralogical nature of the temper. This is another example of how the *Ammoudhia* assemblage would benefit from a petrographic analysis. This kind of analysis has been conducted on some of the other sites mentioned in this study and it would be beneficial to compare the results in a future study.

The *Ammoudhia* sample contains white, black and red inclusions of varying sizes. Without petrographic analysis it is impossible to identify these securely, especially as different types of inclusions react differently during the firing process; so without knowing the firing temperature it is impossible to speculate. However, certain conclusions can still be drawn. Quartz is the most ubiquitous mineral inclusion found in prehistoric pottery and it is likely that many of the white inclusions seen here are quartz. Quartz is also abundant in many types of clay and therefore it is possible that any quartz found is not an inclusion at all, but part of the original clay matrix (Rice, 1987: 410). There is one sample showing gold inclusions (P10.C: Fig. 39, Plate VII), this is probably mica, which again is abundant in clay and is suggestive of a micaceous clay rather than a purposefully added inclusion. However, none of the remaining sample shows this gold inclusion, so this vessel may well be an import from an area with considerably more mica in their clay sources. White inclusions may also consist of limestone and other calcareous material, limestone being readily available at Kissonerga and indeed all over Cyprus and therefore an easy material to use.

|     | Many | Medium | Few |
|-----|------|--------|-----|
| DPW | 29%  | 38%    | 33% |
| RPW | 19%  | 27%    | 54% |
| CW  | 63%  | 0%     | 37% |

Table 2: % of inclusions found in each fabric at Kissonerga-*Ammoudhia*.

As is to be expected, the Coarse Ware contains a large amount of large and medium inclusions, and actually contains more black than any other colour (80% compared to 75% white and 50% red). Through a hand lens these large black and red inclusions appear to be rounded, suggesting a natural rather than man-made source (usually man

made temper has a rough angular appearance as it is usually ground up). Red, brown and black inclusions may be volcanic rock but again, without petrographic analysis this remains speculation. The large amount of inclusions in Coarse Ware is typical, as they counteract thermal shock in vessels used for cooking. The Coarse Ware also contained a number of rather large rectangular and round voids, which may be from organic material lost during the firing process. The inclusions observed in the Coarse Ware from *Ammoudhia* show similarities with those found from other sites in Cyprus. The majority (63%) containing many inclusions, CW from Marki, for example 73.7% contain large inclusions, although the 25.8% medium and 9.8% few at Marki does not correspond so well with *Ammoudhia*, where there are no instances of medium inclusions observed in the CW and 37% contain only a little amount observable (it should be noted here that the amount and size of inclusions observed is based on the Wentworth scale, but remains necessarily a subjective observation). The CW at Alambra consists primarily of trays and also contains very numerous and very large inclusions (Coleman *et al.* 1996: 259).

The Red Polished Ware contains considerably fewer inclusions, 54% containing little observable inclusions; this again can be compared to Marki, where 41.8% of the RPW contain few inclusions (Frankel & Webb 1996: 302). The majority of RPA at Alambra also appears to have a sparse amount of inclusions, whilst RPB vessels all contain numerous amounts of inclusions of all three colours, mostly from rocks (Coleman *et al.* 1996: 247). The RPW from Sotira contains a medium to sparse amount of inclusions of various sizes, mostly of white, grey and black colour and also contains occasional observable organic temper (Herscher 2003: 146). Like these three sites, the RPW from *Ammoudhia* contains mostly white inclusions (80% of observable vessels, compared to 51% containing black and 49% containing red) which, as noted above, may be quartz that is part of the original clay matrix rather than added during the manufacturing process. Petrographic analysis from these three sites mentioned shows that as expected, white inclusions usually consist of quartz and calcareous minerals. There are also three examples of observable voids suggestive of organic temper being used in the RPW.

The quantity of inclusions observed in the RPW at *Ammoudhia* appears to be broadly contiguous with that from other sites, although as noted in previous chapters, the Cypriot RPW contains many different sub types and spans a long period of use so is only used in this instance as a broadly defining category until further analysis of the entire *Ammoudhia* assemblage can be conducted. The similar amount, size and colour of inclusions in RPW to that of other sites seem to argue for a common manufacturing tradition. Although the manufacturing tradition is the same, each area has its own methods for different parts of the process, hence the confusion of sub types that we see today as more and more sites are excavated and more permutations of RPW are uncovered.

|            | <b>White</b> | <b>Black</b> | <b>Red</b> |
|------------|--------------|--------------|------------|
| <b>DPW</b> | 89%          | 43%          | 38%        |
| <b>RPW</b> | 80%          | 51%          | 49%        |
| <b>CW</b>  | 75%          | 80%          | 50%        |

**Table 3: Colours of inclusions found at Kissonerga-Ammoudhia.**

The DPW contains a mixture of sizes and colours of inclusions, with a similar ratio in colour to the RPW, with white accounting for around double that of red or black (Table 3) The DPW also contains a considerably higher amount of inclusions of all colours compared to the RPW. The majority containing a medium amount (38%) with 29% containing many inclusions (mostly white) and 33% containing few (it should be noted that 19% of the DPW is unobservable due to the vessels, all small juglets, being 100% intact). The higher amount of inclusions may be to do with the fact that DPW is fired at a much higher temperature than RPW, again there are several vessels showing evidence of burnt out organics.

The DPW observed at *Ammoudhia* appears similar at this level to that found at Marki, being harder, finer and containing more inclusions than the RP, and the majority of DP at Marki contain a medium amount of inclusions (64.7%, compared to 13.7% few and 21.5% many), although a higher percentage than that of *Ammoudhia*. The DPW from Marki was subjected to petrographic analysis and

shows that as expected; it contained mostly white inclusions made up of medium to fine grained quartz and calcareous material (Frankel & Webb 1996: 178). The petrographic analysis also showed that the DPW is the only ware that could not have been produced locally and is therefore probably an import from the southwest (Frankel & Webb 1996: 157). The DPW from Alambra consists only of 2 vessels of a durable domestic type again very hard and containing many white inclusions (Coleman *et al.* 1996: 260). Again, petrographic analysis shows quartz, calcareous material (limestone or chalk), feldspars and possibly volcanic rock (Coleman *et al.* 1996: 450). The DPW from Sotira on the other hand contained many white and some dark red inclusions which when subjected to a petrographic analysis showed it was manufactured from volcanic or shale rich clays with shale and siltstone inclusions. The DPW from Sotira and *Ammoudhia* in particular show a uniformity not seen in the RPW suggesting a more specialised product (Herscher 2003: 216).

The temper observed in the *Ammoudhia* sample suggests broadly similar tempering to other sites in Cyprus, with DPW containing on average considerably more inclusions than RPW. From what can be observed macroscopically it appears that the majority of temper is from rock sources, with some evidence for burnt out organics in several vessels. There appears no correlation between different temper choices and different vessel forms/functions, with the possible exception of cooking ware. From an isochrestic point of view, this evidence suggests that the *Ammoudhia* potters were aware of the general islandwide tradition for RPW manufacture and used it, applying their own particular taste in decoration, thus adhering to the traditional hypothesis of a broadly similar islandwide society with a particularly regional superficial style. The DPW from other sites so far constitutes such a small amount that the DPW from *Ammoudhia* will be extremely valuable in ascertaining if as is suggested this is a long lived and more specialised and technologically advanced ware than RPW (Herscher 2003: 216). However, once again, although what is noted here is suggestive, nothing can be confirmed without a petrographic analysis, for which this material obviously calls.

### *Forming*

All of the vessels at Kissonerga-*Ammoudhia* are hand made. Although the wheel was in use on the mainland and Cypriot potters were likely aware of its use they chose to maintain their traditional hand built method of pottery manufacture. Here we see an islandwide isochrestic choice, where there is an alternative which may even be more efficient, but it is not until the Late Cypriot that potters adopt this foreign technology. This probably has social and cultural reasons, as Cyprus before the Bronze Age was a fairly isolationist place and even after the initial stages of the Early Cypriot, contact with the outside world remained minimal. It appears that until the Late Cypriot potters were producing pottery largely for local use and trade within Cyprus. The adoption of the wheel only comes when Cyprus opens up to the Mediterranean trading network, probably on account of its rich copper sources.

There is little evidence of the method of manufacture in the *Ammoudhia* sample. There is no apparent evidence of vessels being coil built, it is likely that small bowls at least were pinched, as they all illustrate a misshapen hemispherical shape with thicker bases thinning to the rim and some even retain finger marks, this is similar to bowls at other sites such as Alambra (Coleman *et al.* 1996: 240). It is also possible to speculate how the vessels may have been dried; since most vessels have thinning or flaring rims and are rather bottom-heavy it can be deduced that the vessels were not dried upside down. What appear to be string marks on a few of the jugs, in particular P15.20 (Fig. 64, Plate XI), are suggestive of the round based vessels being hung in string bags to dry.

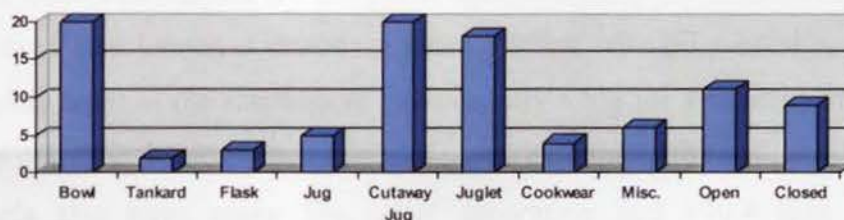


Figure 9: Graph showing ratio of vessel forms found at Kissonerga-*Ammoudhia*.

The forms the vessels took were probably already decided upon and much of the form is determined by function, for example Figure 7 (above) illustrates the large number of pouring vessels apparent in the assemblage (46, compared to 20 bowls). These jugs and juglets are common all over Cyprus at this time and are found in numbers at every site. However, Marki actually contains more bowls (55%) than pouring vessels (Frankel & Webb 1996: 117); this may have more to do with the fact that Marki consists of a settlement and cemetery and *Ammoudhia* is a purely cemetery assemblage, however, small bowls are also the most common at Sotira in the cemetery as well as the settlement (Herscher 2003: 147). The DPW small bowls at Marki show similarities to those found at Kissonerga-Skalia (Frankel & Webb 1996: 157). Unlike other sites where the DPW consists almost entirely of jug/lets and closed vessels, half of the bowls at *Ammoudhia* occur in DPW. This again is highly suggestive of DPW being the local ware of choice. Even more so when one observes the ratio of jug/lets where over 80% occur in DPW.

Although the vessels at *Ammoudhia* conform to a common repertoire of shapes there are several parts of the forming process where the *Ammoudhia* potters make particular choices over equally viable options that are found elsewhere. One of the most obvious areas is that of base shape. Apart from three examples all of the bowls have, as expected, round bases. However three have ring bases, which although not unheard of are rare until the Late Cypriot when Base Ring Ware becomes ubiquitous. Two of these occur in RPW, one in DPW and although P16.24 (Plate XXVIII) may be halfway between flat and ring base, the other two (P16.12: Fig. 80, Plate XV and P10.4: Fig. 27, Plate IV) are definite ring bases. The choices made during the manufacture of these two vessels are altogether different from the norm, both have singular handles; P10.4 having a crudely formed vertical triangular handle, whilst P16.12 is the only bowl in the assemblage to have only a lug for a handle, although lug handles are common on other sites this is the only example at *Ammoudhia*. Both of these vessels also have snake like relief decoration and P10.4 also has a zoomorphic lug in the shape of an unidentifiable quadruped. It is possibly that different choices were made at these stages in the manufacturing process for these vessels as they were intended for a different use than the norm, perhaps as cultic

cultic vessels. Why would the *Ammoudhia* potters choose to experiment with ring bases? Perhaps the answer is functional – the vessels were intended to sit on tables or flat surfaces. But why ring bases rather than flat bases which are found at Sotira and Episkopi? Here is a prime example of the potters choosing one particular method over an equally viable and known one.

The jugs and juglets in the assemblage also show a series of choices being made which suggest there may have existed rules of some sort for the *Ammoudhia* potters to apply when forming vessels. For example, all are rounded, although the round based juglets occur exclusively in DPW, pointed and nipple bases occurring in other fabrics too. Some have been pinched to make more pointed and some have even had nipple attachments added. Round bases are common island-wide, but this pinching is an addition of west coast potters unlike those found at other sites. For example at Sotira the majority of RPW bases are flat, but the DPW vessels are either round or dimpled, suggesting a more advanced shape than RPW (Herscher 2003: 153).

Handle placement is another area that offers the potters choices in the manufacturing process. Most of the handles on pouring vessels at *Ammoudhia* are thrust through the body of the vessel in a manner common to the whole island. Frankel and Webb suggest that at least on small bowls, handle types have chronological implications, with horizontal handles increasing in popularity over lug handles during the MC (Frankel & Webb 1996: 117). They also suggest that at Marki there is a strong correlation between handle and base type with round bases exclusively having horizontal handles and lugs (Frankel & Webb 1996: 117). This is not the case at *Ammoudhia*, where an extraordinarily wide variety of handle and lug shapes and sizes are apparent. Apart from the unique vessels mentioned above, there appears to be no correlation between fabric, base type and handle type, all are equally likely to appear with each other and there is also no discernable pattern between fabric, base, handle type and decoration. It appears, at least in this sample that the potters applied whatever handle suited them.

The pouring vessels, however, do demonstrate a certain amount of uniformity not seen on the bowls. All large round spouted jugs have vertical handles starting at midneck. There are three other examples of midneck handles, all occurring in small juglets, one (P15.9: Fig. 55, Plate IX) is in BSW and is quite distinct from the rest of the small juglets in its handle placement, colour and extremely pointed nipple lug. Of the others, P16.2 (Fig. 85, Plate XIV) is DPBC but again is so dark and monochrome that without seeing the core it could be mistaken for BSW. The other is also DPBC, but has a very red slip. The rest of the jugs and juglets have typically vertical handles starting at the rim and ending on the shoulder of the vessel body. Some rise slightly, all are round to slightly oval in section.

Neck and rim sizes on jug/lets also seem to be rather uniform. Small round spouted juglets tend to have a rather flaring rim, this may be functional, as round spouts tend to pour slower than cutaway, however, this is another example of how function still can be determined as a particular style. There is no evidence of necks being manufactured separately and merged with the body later, such as occurs in the DPW at Marki (Frankel & Webb 1996: 155). This may also be the case at Sotira, where rows of punctures at the base of the neck may help strengthen the join (Herscher 2003: 153). If DPW is indeed a south western tradition then it does not appear to have a uniform tradition within the region. Rather there appears to be distinct choices made by different potters within the manufacturing region. These different stylistic choices are usually not visible on the vessel and must therefore be taken as isochrestic choice made by the individual potters during the manufacturing process.

### ***Firing***

As stated previously, the firing process offers a wide opportunity for technical choice and choices made at this stage in the manufacturing process can drastically affect the final product. Firing is a complex chemical process, involving knowledge, training, skill, and, one would surmise, an amount of experimentation would be required to reach this knowledge. The DPBC that is found at *Ammoudhia* is an example of how the choices the potter made with regard to temperature and firing techniques have resulted in a much harder fabric with a distinctive blue core, suggesting not only



higher temperatures (probably over 800°C), but also more advanced technology (Herscher 2003: 152).

From studying the *Ammoudhia* assemblage it is possible to say that the potters choose a drastically different method of firing their DPW (the RPW, if made locally conforms more to an islandwide technique). The type of fuel used cannot be confirmed, but hypothesis can be made with regard to the temperature and rate of firing. As stated above the temperature probably exceeded 800°C, which is unusual in this period in Cyprus. Red Polished Ware is fired at a much lower temperature in an oxidising atmosphere. However, White Painted Ware also appears to have been fired at high and controlled temperatures (Coleman *et al.* 1996: 255). This high temperature is suggestive that a kiln may have been used rather than an open fire, which seems to have been the norm, as open fires do not normally achieve temperatures over 815°C (Coleman *et al.* 1996: 244). A kiln gives a great deal more control over temperature and air control and is more likely to produce an all round even fabric colour that we see here, unlike open fires which have hotspots and usually result in fabrics of different colours or with unoxidised cores. Many of the vessels show evidence of lime spalling and burst air bubbles which is indicative of calcareous inclusions fired over 800°C for short bursts (Herscher 2003: 155).

Of the DPBC with visible cores at *Ammoudhia* 45% have a visible fabric, the majority being of the reddish yellow/brown colour with an outer margin of oxidised clay. This is indicative of a reducing atmosphere with quite rapid cooling. The 55% DPBC that is blue throughout is indicative of a fully reducing atmosphere with less rapid cooling (Frankel & Webb 1996: 155). Firing in a reducing atmosphere, indicates another unusual choice on the part of the *Ammoudhia* potters as most MC pottery is fired in an oxidising atmosphere (Coleman *et al.* 1996: 251). The DPBC found at other sites appears to be contiguous with the *Ammoudhia* firing technology. At Marki half the DP has a reddish brown fabric (5YR5/6) similar to *Ammoudhia* and Frankel and Webb therefore suggest a discrete manufacturing process for this ware (Frankel & Webb 1996: 149). At Sotira the DPW all has a blue core produced by the reduction technique which Herscher suggests is pyrotechnically more

advanced than the RPW (Herscher 2003: 152). This is interesting as both Sotira and Marki have DPBC in early contexts, much earlier than one would have originally expected. The fact that DPBC appears to be more technically advanced suggests that the technology may have existed prior to that of RPW. What has been tentatively termed proto DPBC has been discovered at Erimi (Herscher 2003: 218) suggesting that DPBC may have its origins in the Chalcolithic. However, Late Cypriot Base Ring Ware also appears to have similar firing technology and it is also suggested that DPBC may be a long lived ware spanning into the LC (Herscher 2003: 218). Although not a part of this thesis this could have wide connotations with regard to the appearance and development of pottery technology, cultural traditions and society both at the Chalcolithic/EC transition and the nature of the development from MC regionality to LC homogeneity and urbanisation and therefore deserves further investigation in the future.

The RPW at *Ammoudhia* shows similar firing techniques to that from the rest of Cyprus. The majority of vessels have a medium soft reddish yellow/brown fabric and 30% have blue cores of varying thickness. This is indicative of a low/medium heat in an open fire with oxidising conditions, the vessels often not being fired long enough to oxidise all the way through. The RPW at Marki shows similar colours although the most common is dull brown with finer fabrics tending to be brighter yellowish or reddish brown (Frankel & Webb 1996: 115). The fabrics seen at *Ammoudhia* are certainly on the whole of a finer variety than the norm, possibly because it is a funerary assemblage. However, like *Ammoudhia*, the RPW from Marki shows no significant differences. The 2 types of RPW at Alambra appear to be fired at low temperatures and are of a soft-medium texture, softer than is encountered at *Ammoudhia*. The Alambra excavation found no evidence in the settlement for pottery firing, leading the excavators to suggest that firing was done at a distance from the settlement (Coleman et al 1996: 244). At Sotira the RPW varies from soft to moderately hard, again reddish yellow (5YR5/6) and is usually not fully oxidised with a grey core (Herscher 2003: 147). RP Mottled is hard to moderately hard with a thick dark grey unoxidised core. The mottling that is seen at Sotira is also evident on many of the vessels both RPW and DPBC at *Ammoudhia* and is

probably due to firing conditions. The frequent appearance of mottling at Sotira and *Ammoudhia* suggests purposeful manipulation of technology for a desired observable result, thus implying another isochrestic choice.

The Coarse Ware at *Ammoudhia* is like Coarse Ware all over Cyprus fired at low temperatures in an oxidising atmosphere to produce a soft red fabric whose manufacture probably signifies more restricted choices in the firing process than other fabrics based on functionality. The only other wares to be studied in the *Ammoudhia* sample are a possible Black Slip Ware juglet, which is 100% intact so the fabric cannot be examined and the fragments of a black topped vessel (P16G/H: Plate XX). The soft pale red fabric and black top are not seen in any of the rest of the assemblage and are strongly indicative of an import, as is the presence of gold mica inclusions. However, this is also indicative of advanced firing technology, as the black top is achieved by the vessel being fired, or cooled in such a way that the rim and interior (which is also black) were fired in a reducing atmosphere whilst the exterior was fully oxidised. These vessels are also present at Alambra where the excavators suggest that a kiln may have been used to exercise more control over the firing process.

This thesis is based solely on the style of ceramic technology in the *Ammoudhia* sample and does not have the scope to go into detail in Rye's final three stages, which are all three extremely complex issues which may benefit from further future study for a wider picture of the life span of the *Ammoudhia* pottery. However, with that proviso it is possible to make some suggestions as to the nature of these last three stages.

## **Distribution**

### ***Can isochrestic choice be seen in or influence distribution?***

On the presumption that the DPW is made locally, it seems to be the case that, like that observed at other sites such as Marki, the majority of the DPW is made for a local market. The enormous amount of DPW found at *Ammoudhia* is highly

suggestive of a local manufacture that stayed in the local area. The ground scatter from Kissonerga *Skalia* is homogenous to the *Ammoudhia* assemblage, supporting this hypothesis. Nevertheless, DPW is found at other excavated sites, though never in the quantities found in the Paphos region. Indeed, the *Ammoudhia* assemblage is the only site where this ware is the dominant. It may very well be that *Ammoudhia* is at the centre of the DPW industry and this corpus may serve as the defining assemblage for Western Cyprus. Therefore this preliminary attempt to catalogue a portion of it serves as the next step to elucidating this poorly understood period.

DPW found at other sites appears to be more domestic, such as the coarser DPW found at Alambra (Coleman *et al.* 1996: 260). The evidence from Marki deserves further study, as the large amount of DPBC found there is one of the few assemblages that is large enough to be compared and appears to show evidence of some west coast traits as well as more typical central plain motifs. When DPW is found it is predominantly in the form of larger, coarser every day ware and mostly in the form of closed or storage vessels, mostly jugs, suggesting it was traded or exchanged for its liquid contents. Herscher suggests that each type of vessel has a distinct uniform shape and decoration which may have served as a recognisable trademark for its source and contents. (Herscher 1991: 48).

The RPW at *Ammoudhia* is similar to other sites as it shows a locally made ware with some isochrestic choice indicating regional variations in a broadly similar tradition. However, in this ware there is evidence for some imports from other areas of Cyprus to Kissonerga. Vessels P15.9 (Fig. 55, Plate IX , P16.G/H (plate XX) and P16.I (Plate XXI) are likely imports. P15.9 stands out among the small juglets as a different fabric (Black Slip Ware), with a different handle placement; midneck compared to the usual *Ammoudhia* high vertical. It also has a particularly elongated nipple lug, these factors suggest this vessel is likely to be an import, possibly from the south coast. P16.H and P16.I are probably from the same vessel and show vastly different decorative motifs from the usual *Ammoudhia* circles and dots. In fact, the wide concentric circles seen here are probably made with a multi-tool and are highly indicative of central plain and in particular Marki. Although not included in this

sample, the tentative Brown Polished Ware is almost certainly also a south coast import, however, these vessels have yet to be fully examined.

Comparing the material to other sites it appears that distance becomes a factor in the distribution of DPBC. On the south coast it is possible to observe the amount of DPBC reducing as one travels eastwards. Indeed, beyond Kalavassos there is little or no evidence for DPBC and it is at this point that WPW can be seen to become more dominant. Current petrographic analysis being conducted on WPW may help elucidate the microscopic nature of this fabric (Maria Dikometou: Personal communication). Comparisons can then be done with other wares including DPW to ascertain if they are indeed very different wares representing in some way east and west or if they are actually technologically similar showing similar choices made by potters and therefore a shared pottery making tradition and society. The comparisons conducted in this thesis were based solely on photographic and written evidence, but based on these I would suggest that further comparisons would be extremely beneficial to the study of exchange and interconnectivity between these regions.

## Use

The majority of vessels from *Ammoudhia* seem to have been made with the intention of being placed in a grave. From the small sample studied here it is impossible to say if the corpus at *Ammoudhia* is representative of any of these theories or if the tombs studied represent a particular social status. The answers to these questions are irresolvable as they are reliant on contextual information which was lost during excavation, the top layers of all but two tombs being destroyed and most of the skeletal evidence destroyed. There are several clues however, that suggest that this assemblage consists of mainly purpose built funerary vessels as opposed to functional domestic items that were placed in the tomb when the owner died:

1. The type of vessels found in Tomb 15 and 16 in particular appear to be of a high quality. The amount of small, fine, incised juglets in particular are commonly found as grave goods. Furthermore, the quality is rather fine

compared to settlement material. The question also arises as to why it is only these vessels that are decorated in this assemblage, perhaps it is to do with their contents, e.g. oil, perfume or even opium. Indeed there is a higher proportion of decorated pottery in cemeteries than in settlements throughout Cyprus at this time (Washbourne 2000: 22).

2. Many of the larger cutaway spouted jugs are badly fired, being extremely pockmarked and damaged on the inside, making it questionable whether they could actually be used more than once. This being said, the slip and outside appearance is fine and the inside would not have been observable, although it would be expected that further deterioration would occur if vessel was continuously used. This is also apparent in the cemetery at *Phaneromeni* (Washbourne 2000 140).
3. The large ratio of pouring vessels is suggestive of some form of feasting/drinking, or perhaps signifies the number of mourners involved in the funerary rituals. However, Webb advises that it is impossible and unanswerable to say what afterlife beliefs or funerary rituals may have existed in prehistory (Webb, 1992: 89).
4. The number and quality of vessels may indicate status, although again it must be noted that this is only a sample of a much larger assemblage. Although I believe it is important to flag these issues for possible future research, at the moment it is impossible to conjecture whether the occupants and/or mourners of Tombs 15 and 16 were of a higher status, had specific beliefs or in fact just had a potter in the family. However, there is evidence of wear on the Coarse Ware at least. Vessels P5.B (Fig. 22, Plate III), P10.13 (Fig. 36, Plate VI), P16.20 (Fig. 98, Plate XVII) and P16.B (Plate XXVIII) have burnt bottoms and worn tops showing evidence of being used at least once.

## **Disposition**

As Rye suggests what happens to a pot after its initial use is still a necessary part of the process. However, at *Ammoudhia* it is clear what has happened to the pots; they have been placed with the dead, for whatever reasons the people saw. Therefore it is

not my intention to discuss this part of the process, involving, as it does little in the way of evidence for isochrestic choice.

### **Non-Essential Processes**

Once a pot has been manufactured through the essential processes 1-4 set out above, it is capable of functioning in its intended capacity. However, it is the non-essential processes of surface treatment that give a ware its name, identify typologies and chronology and are generally studied for evidence of style and ethnicity. As stated previously this area is easily observed and capable of great variation and has therefore been studied a great deal in the search for style and ethnicity. Whilst acknowledging that the stylistic variations evident in the outward decoration of Early-Middle Cypriot pottery is an interesting and valuable avenue of research it is not the aim of this thesis to examine the different surface treatments and outward decoration of the *Ammoudhia* assemblage with regard to the outward impressions. Rather it is in the technology and methods used to create the surface appearance that will be examined. The decorative motifs and styles are easily learned and applied and easily changed, but the technology that goes to make them is culturally ingrained and therefore harder to change, so it is possible that what may seem to be an entirely different outward style is actually the same technological tradition. Alternatively, what may appear to be similar outward styles may actually be shown to come from very different technological traditions and only appear the same superficially; all of which have interesting repercussions when studying the societies that made the pots.

### **Surface Treatment**

#### ***Slip***

All of the vessels at Kissonerga-*Ammoudhia* have had a slip applied (with the exception of P16.13 (Fig. 87, Plate XVI) where the entire slip has 'slipped' off). Time and conditions in the tombs have worn the slips to a greater or lesser degree but it is still present and in some cases it is possible to examine evidence of manufacture.

Slipping is the application of a coat of clay (usually superior) to the vessel surface, prepared as a suspension in water (Shephard 1956: 67). Slip should adhere to the body, it should harden within the same temperature range as the body and it should conceal the whole body (Shephard 1956: 68). Different clays can result in different surface colours, although this is also largely determined by the firing process. There are many variations and choices available in the slipping process and it is possible here to see some of the isochrestic choices made by the *Ammoudhia* potters. The *Ammoudhia* slips all appear to have been applied immediately before firing but after decoration as in every case of incised decoration the slip is seen to be coating the inside of the incisions, confirming that it was applied after the incisions were made. This is in contrast to WPW, where, through necessity, the slip is applied before the decoration, the white slip forming a blank canvas as it were for the painted decoration. This juxtaposition illustrates the importance of the technological choices made at different stages of the manufacturing process in achieving different but equally complex and sophisticated results.

Slips can be applied by a number of different methods; by dipping the vessel in the slip or painting it on or applying it by rubbing on with grass, hands or even fur. At Sotira for example, several vessels (mostly RPW) show evidence of grass or straw and smearing as though the slip was applied with a cloth (Herscher 2003: 147). Most of the *Ammoudhia* vessels show an even but thin application of smooth slip suggesting dipping or highly skilled application by hand. There is little streaking or marks suggesting application with a cloth or anything else. However, a few of the jugs (P16.8: Fig. 94 Plate XV, P16.10: Fig. 95, Plate XV, P16.16: Fig. 84, Plate XVI and P15.20: Fig. 64, Plate XI) show lines emanating from the round base of the vessels rising up to the main body. This is suggestive of the vessels being hung up to dry, probably in string bags or baskets after the slip was applied but while it was still quite wet.

The colours achieved in the slips at *Ammoudhia* are fairly conservative, being usually yellowish red or a pinkish buff. Many of the DPBC vessels are actually slipped in a colour similar if not identical to some of the RPW vessels indicating how easy it is to



mistake the two superficially. This raises the question of the suitability of identifying wares on the basis of surface treatment. Like at Marki and other sites there seems to be little uniformity or correlation between vessel fabric, form and surface colour, although again similar to Marki finer fabrics tend to be brighter with better quality slips however there are no significant differences in the range, variability or proportional distribution (Frankel & Webb 1996: 115).

All of the vessels at *Ammoudhia* are polished; a technique common all over Cyprus. Polishing consists of rubbing the vessel to obtain a smooth, even surface and is used throughout prehistory instead of a glaze. It can be applied to slipped or unslipped surfaces and is usually applied once the vessel is almost dry. A stone or pebble is the most usual tool used for polishing but bones, wood or smooth animal skin are also tools used to achieve a polished surface. It is not possible to determine the methods used by the *Ammoudhia* potters, however, observations can still be made. The majority of vessels show a slight lustre with the RPW vessels showing a slightly thicker application of slip and normally a slightly higher lustre. Although it should be pointed out that none of the vessels in the four tombs studied have a high lustre, with the exceptions of the probable imports P16 G, H I & J (Plates XX & XXI). In fact, many of the DPW vessels have a very slight if not matte finish and the RPW vessels have a slightly thicker slip and higher degree of polishing, in fact the darker red the vessel slip is the higher degree of lustre is visible. The possible Brown Polished Ware in Tomb 4 however, has a very high lustre and a thick brown/black slip indicating completely different manufacturing techniques, which are enhanced by the darker fabric and alien decorative motifs.

### ***Decoration***

The *Ammoudhia* assemblage appears to be a highly decorated assemblage, having a much higher percentage of decorated vessels than most other sites. For example, at Marki the DPW is largely undecorated and only 1% of the RPW being decorated. Out of the sample studied so far an astonishing 73% of the vessels show some form of decoration, if including lugs. If lugs are not included then 50% still show either incised, impressed or relief decoration. As Shephard notes, pottery affords a great

deal of scope for decoration and can be subjected to all manner of methods (Shephard 1956: 69). However, the *Ammoudhia* sample, although highly decorated in comparison to other contemporary sites, shows restraint in the methods of decoration used and although not the subject of this thesis it is worth mentioning for future research that the motifs in relief and incision are all extremely limited, a few standard motifs being used again and again notably the impressed circle and dot – an acknowledged west coast motif (Morris 1985: 299). This homogeneity may indicate synchronicity or at least a compact chronology, which may prove important in comprehensively dating the material. This thesis does not have the scope to delve deeply into the issue of chronology, although if this material is to be studied further, chronological identification will be imperative.

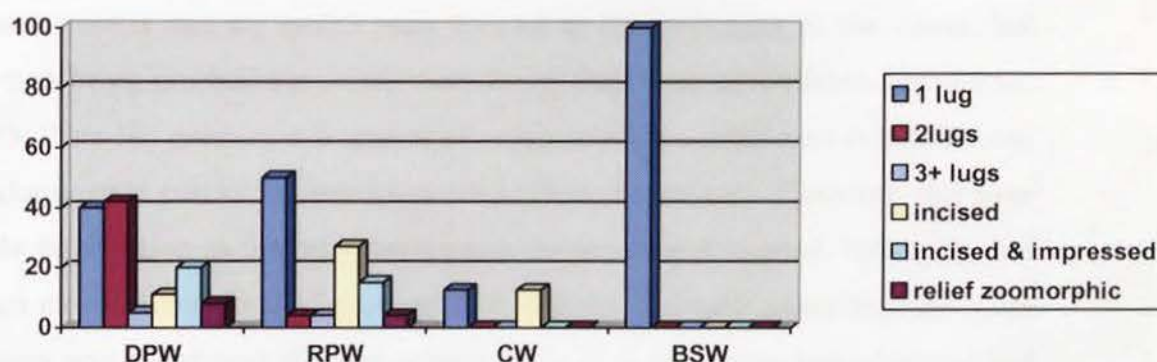


Figure 10: Graph showing % of decorated fabrics

It is in fact in lugs where the most stylistic variation can be observed. The variation in lugs ranges from the most common pinched or nipple type to long, elongated cotton reels or tablet to the truly fabulous zoomorphic representations of goats and other animals. Lugs are found on every single jug/let in the sample apart from ones that are incomplete but may have had them originally. The cotton reel types are only found on the three flasks and elongated tablets, horns and zoomorphic lugs are restricted to bowls, which show a variety of lengths and motifs quite different to that of other sites; small bowls at Alambra, for instance only have knob lugs (Coleman *et al.* 1996: 250). Most of the nipple lugs are clearly made by pinching the clay of the body to a small point. The longer lugs are more likely to be made separately and

attached before the slipping process. Some of the longer lugs are elaborately and carefully decorated, indicating that they were decorated prior to being attached to the body and slipped. Lugs can also have a functional use, as a stabiliser for thumb or hand in pouring vessels and as an actual handle on small bowls. P16.12 (Fig.80, Plate XV) for example has no handle, only a long, incised lug and other bowls whilst having one handle have elongated lugs on the opposing side which may be functional. The zoomorphic lugs show an artistic charm as well as suggesting methods of manufacture, they all appear to be formed by pinching and shaping with the hand and incur no specialist tools or technology.

The relief decorations are all zoomorphic motifs, mostly snakes, and are perhaps not as well represented in the *Ammoudhia* sample as at other sites. The likeliest method of manufacture is that the motifs were formed at the same time as the vessel, but rather than being pinched out of the main body, they were added later. Sherd P5.C (Fig. 23, Plate III) contains a fragment of snake relief, the relief part is rather loose and unfortunately part of it came away while being examined. However, this gave valuable information as the body underneath the snake was slipped, indicating that although most decoration was added prior to slipping, it would appear that this relief decoration was added post slipping (although likely to have been manufactured and slipped at the same time as the vessel).

Incised and impressed decoration is common in the *Ammoudhia* sample, although it is restricted almost exclusively to small fine juglets and the occasional bowl. This may in fact have a technological explanation, since it is much easier to incise fine fabrics with no rough fabric or large inclusions to mar the path of incision. As discussed above, this type of decoration was performed before the vessels were slipped. In fact, impressed decoration is best done whilst the vessel is still wet, although incisions may be performed on leather hard to hard clay (Rice 1987: 144). The incised and impressed decorations seen here comply largely to the typical west coast motifs of incised lines enclosing punctured dots and impressed circles with a central dot (with the exceptions of probable imports as discussed above).

A number of tools and methods would have been available to the *Ammoudhia* potters, none of which survive in the archaeological record. Although again they appear to show considerable restraint and as strong a tradition in maintaining their choices as they do in other parts of the manufacturing process. The impressed circles, for example, are likely to be made by a small hollow tube, possibly a reed, stem or even a small bone. In the study sample great uniformity is noted in the size and shape of these circles, indicating the same type of tool was chosen every time. Likewise, incised lines both short and long show a similar uniformity, suggesting the same choice of tools. Small dots or punctures are also evident and could be made again by a number of different tools. Although they do occur at the necks of some vessels there is no evidence that they are there to hide a join or other functional explanation such as that made at Marki (Frankel & Webb 1996: 155). Other types of incision, such as the short line or gouge are incised rather deeply and show some clay displacement, although they again illustrate a uniformity of length and depth.

In comparison to other sites the decorative choices made by the *Ammoudhia* potters show similar technology but being used for different aesthetic motifs and ideals. The decoration showing a regional restrained flavour in comparison to other sites, even though many more vessels are decorated. This may be because the *Ammoudhia* assemblage dates from a short chronological period. The tradition of choosing the same tools and methods of decoration may go some way to explain the lack of other types of decoration, such as White Painted Ware and even the lack of other methods of incision. Other sites around the island show decoration using a multiple stroked tool, where several parallel lines or circles can be easily made. Whilst this type of tool may have been used to score the decoration on the possible Brown Polished Ware from Tomb 4 (Plate XXII) and possibly the lines and concentric circles on P16.J (Plate XXI), these vessels are highly likely to be imports, indicating that there was an awareness of the type of decoration and probably the tools and technology which made it, but no desire to adopt or incorporate it into the *Ammoudhia* repertoire. It is well to remember also that surface treatments can be misleading to the archaeologists eye, suggesting as it may a separate ware and tradition where none occurs and it is well to look behind the mask to the inner fabric and the technologies

and tools used by potters which are less open to change and therefore a truer indication of the cultural traditions of the society in question.

Finally, a number of the incisions still show evidence of a white filling, elsewhere described as possible lime paste (Washbourne 2000: 132) or perhaps chalk paste mixed with carbonised bone similar to that at Alambra (Barlow 1994: 46). Without a petrographic or chemical analysis it is impossible to say what the paste at *Ammoudhia* is made from, but it is applied carefully into the incisions, probably with a similar tool to that which made them. Although if, as Washbourne suggests, it is so easily washed away, then it may have been applied with a less careful hand after firing and excess marks were wiped away. This then has implications to the use of the vessels, if the white paste is so easily washed away then it implies that many of these vessels have never been used (or at least never been washed to any degree) and may indeed have been manufactured solely for funerary purposes.

### **Summary & Conclusion**

To conclude, it can be seen that in the Early-Middle Cypriot a number of choices were available to potters at every stage of the manufacturing process. By studying the technology and manufacturing process for isochrestic variation rather than outward, superficial style, it can be seen where and possibly why many of these choices were made. This provides us with hitherto unseen information and a whole new picture of the choices made by the potters and the influences and traditions that they lived and worked by emerges. From the evidence gained through studying the technology it appears that what we may have here is a society, similar in many ways to other sites in Cyprus and with likely contact with other sites or at least part of a larger island wide trade network, but also one that displays that very Cypriot tendency to keep itself to itself and stick to its own traditions and motifs, whilst still being culturally similar it retains its own unique south west identity in its pottery manufacture.

## Chapter 5

### Conclusion

In this thesis I have employed a methodology based on isochrestic variation to study the technological choices made in the manufacture of the *Ammoudhia* pottery. In this final chapter I intend to discuss the results from the study described in Chapter Four, illustrating the validity of this approach and discussing the degree to which research aims were met, whilst exploring the potential for further investigation. Rather than providing definitive answers, it is my intention, in this limited study to provide a sound basis for future research. The second part of this chapter therefore, will be dedicated to suggestions for such future research that is outwith the scope of this thesis but, in my opinion, deserve further investigation.

As stated in Chapter Three there is no one overall defining stylistic theory or one in particular that is specifically suited to an analysis of prehistoric ceramics. However, for the purpose of this thesis I elected to study the *Ammoudhia* sample using analysis of technological choice and isochrestic variation, largely using the theories of Sackett and Lemonnier. This approach was chosen for several reasons as stated in Chapter One; firstly this type of stylistic analysis has not been applied to Early-Middle Cypriot ceramics to any extent. Secondly, Sackett's model was formed specifically as a tool for archaeologists (Sackett 1982: 109). Rather than studying outward decoration that can be easily adopted and changed, I chose to examine the methods and process of manufacture which are harder to change and less likely to be consciously manipulated and are therefore more representative of the underlying social traditions. Society is not a static phenomenon, it is complex and dynamic; an isochrestic approach allows for the study of choice at small, unconscious levels which in turn allows for the observation of social dynamics at work.

In Chapter Three I have identified the stages in the pottery making process where isochrestic choices are made and have then in Chapter Four, applied this model to the *Ammoudhia* sample, identifying the choices made by the potters at every stage, and then comparing these choices to the known choices made by potters at other known

contemporary sites in Cyprus. This variation of choices possibly reflects social identity, although the relationships between society, technology and artefacts are extremely complex. By analysing technological choice it becomes possible to gain a glimpse into the wider relationships between style, choice, function, technology, aesthetics and wider social structuring such as trade and social hierarchy (Lemonnier 1992: 23).

### **Analysis of Results**

As stated above, it is the purpose of this thesis to illustrate the potential of an isochrestic approach in the study of Cypriot Bronze Age ceramics. It must be acknowledged that all of these inferences are subjective, being based entirely on my own personal observations, however, I would argue that this approach has led to some interesting results that may not have been observed in a traditional stylistic analysis, that will be of use to future researchers. Identifying and isolating the specific parts of the process where the potters exercised isochrestic choice and comparing them to choices made from other sites has raised several interesting points.

First and foremost is the comparison between the two main wares at *Ammoudhia*. A traditional analysis would suggest that these two wares are very similar; they both appear in the same vessel forms, with similar decorative motifs and similar bases, handle placements, etc. As stated previously, it has also been suggested that DPW may in fact be a west coast version of RPW (Philip 1983: 48). A view of the vessel interiors in section shows a difference in core colour and hardness indicating different firing temperatures, but the colour and nature of inclusions is broadly similar (although DPW overall contains more) indicating similar manufacturing methods but different firing techniques. Thus, a standard evaluation would suggest that these two wares are broadly similar, local south west wares.

By identifying the isochrestic choices made by the *Ammoudhia* potters this study has shown that there are in fact deep and profound differences between the two wares. The results from this study suggest that the RPW at *Ammoudhia* does conform to an

island-wide tradition, the size, number and colour of inclusions and the firing process conforms to the RPW evidence from other sites. Surface treatment differs, as can be seen comparing other sites, as some are mottled or decorated differently. The *Ammoudhia* RPW appears to be a locally made variant, having regionally different shapes, handles, bases and decorative repertoire, but despite these outward and superficial differences, which may signify a form of emblematic style (Wiessner 1983: 257), when the manufacturing process is analysed what appears is a locally made ware conforming to an island-wide tradition of manufacture. This would require some form of communication and a willingness to adopt common manufacturing traditions, whilst still imbuing the vessels with motifs and forms peculiar to a specific region.

The manufacturing process of DPW shows an entirely different tradition to the RPW at *Ammoudhia*. Although DPW is already widely accepted as a south-western ware, its unique characteristics have not been fully understood (mainly because of the lack of a large enough corpus of material); the *Ammoudhia* assemblage therefore is extremely important. The DPW from *Ammoudhia* appears to share similar manufacturing techniques to those found at other sites. Looking at the manufacturing process and identifying isochrestic choice has shown that the potters used similar types of temper as RPW, but in larger amounts. It also shows the vastly different firing process. Fired in a reducing atmosphere at very high temperatures this is a significantly different tradition, calling for a much higher degree of skill and specialisation than RPW (Herscher 2003: 216). The fact that there is a much larger degree of homogeneity than in RPW is also suggestive of a strongly maintained cultural tradition that has a long and ingrained history. Pot making is a strong tradition that is hard to break; ideas are usually passed on as part of a social tradition. The fact that DPW may have its roots in the south western Chalcolithic (Herscher 2003: 218) may answer why this ware shows such a high degree of skill and homogeneity. DPW may in fact have existed prior to the introduction of RPW and the local population may have shared enough social traits with other areas to share in the common traditions of RPW, but still kept its local, ancestral trends alive in DPW.



This high degree of specialisation is noteworthy as it suggests considerable time spent practicing and perfecting techniques which are then passed on through training to later generations of potters. This specialised knowledge may well have been closely guarded; ethnographic parallels suggest that pyrotechnology is often imbued with ideological and symbolic importance. This may also be significant in this period as it is the Middle Cypriot that witnesses the rise in the use and exploitation of Cypriot copper resources. Advanced pyrotechnology would certainly have been valued in this metallurgic process. This in turn could have led to the enormous changes in Cypriot economy, culture, social structure and extra-island relations.

Interestingly, WPW also shows this high degree of technological specialisation (Steel 2004: 135), is this also an older, local ware belonging to the north east? This would go some way to explaining why there is no WPW in the south west. Alternatively, no microscopic comparisons have as yet been done on DPW and WPW, it may actually be that they are both very similar wares sharing similar technologies and only differ in outward decoration, thus implying assertive style (Wiessner 1983).

There are in fact several different and complex scenarios that may fit the evidence so far. For example the *Kissonerga-Ammoudhia* potters now appear to have had sophisticated pyrotechnology and the ability to produce a technologically advanced and homogenous ware as well as other wares adhering to broader manufacturing traditions but still imbued with their own particular aesthetics. What kind of society might have this restricted technology? From the existing archaeological evidence it appears to be an agricultural based village or small town society, showing signs of social hierarchy and a complex ritual and belief system. Although pottery making may be an important social tradition and skill it is not necessarily the case that potters were held in high esteem. Again, this thesis does not have the scope to engage in the debate over who may have made the pots and in what economic context, but it is possible that further analysis of this assemblage could offer relevant information.

It does appear that the entire island has a broadly similar social structure and culture, sharing the technology and aesthetics of RPW, however having strong regional

identities. DPW is found, albeit in small amounts, at other sites, and some imported vessels are found at *Ammoudhia*, although these constitute a very small percentage of the assemblage. DPW is so recognisable that other areas of Cyprus would immediately recognise it as a south-west ware; whether this is to uphold regional differences or to communicate to other regions through style remains to be seen.

### **Suggested Areas for Future Research**

Despite the early stages of this work, as illustrated above, this hypothesis has already yielded valuable information and raised questions providing a foundation for further research in several different but complimentary areas.

#### ***Comprehensive analysis of the Kissonerga-Ammoudhia assemblage***

The *Ammoudhia* assemblage is the largest corpus of DPW so far excavated in Cyprus. Even at this early stage where only a small sample of the assemblage has been examined, it is clear that this is an important collection, deserving fuller analysis than this thesis can offer. Therefore I would suggest that a complete analysis of the assemblage would be a valuable pursuit for future researchers. In particular the two intact tombs have a large amount of material as yet unexamined which may yield important information and will at the very least give a clearer and truer picture of the complete assemblage. It is particularly important to examine the entire assemblage for any chronological indicators, as the sample studied here shows no overwhelming indicators for a date outside the late Early-Middle Bronze Age.

#### ***Excavation of Kissonerga-Skalia***

Although the *Ammoudhia* assemblage is the largest collection of DPW, it was also excavated as part of a rescue operation and unavoidably, evidence was lost and recording was minimal. In the west in particular, excavation of a contemporary site (settlement or cemetery) would be extremely helpful to adding to our knowledge and answering some of the questions regarding the Early-Middle Cypriot. Kissonerga-Skalia would be the obvious choice for excavation, being a known settlement which has already been surveyed. Excavation of the settlement perhaps belonging in life to

the occupants of *Ammoudhia* would offer the opportunity to compare cemetery and settlement assemblages as well as providing information on the lifestyle and culture of the society in question. Importantly, Skalia could also provide valuable information regarding the dating and chronology of the ceramics. There may also be the opportunity to uncover a pottery manufacturing location which would be invaluable in continuing an investigation into the ceramics of the area.

In lieu of a full investigation, I would also advocate a field walk or survey, as initial visits to the remains of the site show that beyond the boundaries of the known cemetery and the recent building works surrounding it, there is still a large area of undisturbed limestone scrub, where even a cursory field walk yielded pottery fragments. The overgrown nature of the terrain coupled with the soft limestone geology is highly suggestive of there being more tombs awaiting discovery.

### ***Re-Evaluation of typology***

As stated in Chapter Three the typology for the Early-Middle Cypriot is a complex and convoluted one. Attempts have been made previously to disentangle the web of wares, but only at specific sites (Barlow 1989) or with specific wares (MacLaurin 1980). With so much new evidence from the south-west it is becoming clearer that a radical re-evaluation of the typology is necessary. The *Ammoudhia* assemblage is evidence of large corpus of what was once thought a minor ware. DPW was also originally dated to late MC, but more recent evidence from Marki and Sotira in particular suggests that this is a long lived ware, being exported (to Marki, as thin section analysis illustrates) as early as the EC, but also surviving into at least LCI.

Analysis of isochrestic variation and ceramic technology also illustrates that many of the wares that are superficially different and therefore classified as separate wares are actually the same and vice versa. DPW which has been described as the RPW of the west coast actually proves to be technologically very different, although appearing very similar on the surface. This illustrates the validity of looking at technological choice as well as raising the question of ware identification. I would not necessarily advocate a typology based on manufacture, since this can often not be

observed unless the pot is broken, however, a clearer typology is certainly required and perhaps one based on intrinsic chemical compositional characteristics (King 1987: 215). This is particularly needed in RPW where a myriad of categories are used to describe what is technologically the same ware, as well as the misleading categories of RPI – IV, suggesting a smooth evolutionary trajectory which did not exist (Barlow 1989: 56). This makes the identification of sherds and even whole vessels hopelessly confusing. Therefore, to aid in the establishing of chronology and inter-island relations I would strongly advocate some kind of standardised criteria for recording Cypriot Bronze Age ceramics.

### ***Petrographic Analysis***

Many of the questions raised in this thesis could be answered quickly and simply by a petrographic analysis of the ceramics and it seems to me essential that this be undertaken in the near future.

A petrographic analysis of ceramics involves thin section analysis, grinding sherds down to 0.03mm thick, then observing the mineral composition under a polarising microscope. Ceramics are a distinct combination of naturally occurring raw materials mixed with added temper of a varied nature which is then subjected to differing heat processes that leave mineralogical signatures. These signatures left by the manufacturing process can help distinguish clay sources, fabric composition (including identification of temper), methods of manufacture and firing temperature, by observing changes in certain key minerals (Peacock 1970: 380). By observing these microscopic characteristics it then becomes possible to compare to macroscopic ones and similarities and differences between the two can be observed. For example, are the superficial similarities observed in decoration mirrored microscopically or not? Are pots that look alike really alike or are they in fact manufactured very differently? Petrographic analysis also allows for observing any relationships in the manufacturing process that would otherwise go unobserved. For example, do certain forms correlate to certain clays, such as Barlow observed at Alambra (Barlow 1989: 55).

A petrographic analysis can also identify the geological nature of the clays and tempers used in a vessel so that they can then be compared with local availability. This has the important use of being able to identify if pots are made locally or if they are imports, such as Frankel and Webb suggest about the DPBC found at Marki (Frankel & Webb 1996: 157).

The *Ammoudhia* assemblage would certainly benefit from a petrographic analysis in all these ways. Establishing that the pots are made locally would firstly establish a sound framework, before going on to establish the nature of many of the choices in the manufacturing process which could yield much important information but which this thesis has been able only to recognise as potentially very useful but has only been able to flag for further research.

Drab Polished Blue Core Ware is still largely an unknown factor and this kind of analysis could go a long way to establishing the nature of this potentially important ware, both in its manufacture and in the choices and traditions that go into making it so different to its contemporaries. Furthermore, petrographic analysis will help establish any existing correlation with earlier or later periods that may otherwise escape notice. For example, tempers or particular methods of manufacture used in DPBC may be compared to ones used in other periods or sites to establish an otherwise unknown relationship or perhaps establish the origins of a particular choice made which may then explain why this choice is so socially ingrained that others (eg, WPW) could not make headway against such a long and ingrained tradition.

### ***Establish the Chronology of DPW***

As stated in Chapter Two and indeed throughout this thesis, few studies have so far been conducted on DPW. This is largely because in most surveys and excavations it has accounted for a very small percentage of the entire ceramic assemblage. However, studies of the DPW from Sotira and Marki in particular now suggest that this is a long lived ware. Its existence in EC stratigraphy at Marki suggests that it was being imported in the EC, but its existence in LC contexts such as at *Phaneromeni* also show it being used into the LC when RPW drops off. It may also

be that DPW may be the precursor of Base Ring Ware, the ubiquitous ware of the Late Cypriot. The *Ammoudhia* assemblage, being the largest collection of DPW so far discovered should have much information to yield on this interesting and provocative subject. However, as mentioned above, the assemblage must first be properly dated and examined for any evidence of chronological change.

DPW is extremely homogenous and as shown above it also appears to come from a particularly strong, but localised, social tradition of manufacture. The pyrotechnology used in its manufacture appears to be more sophisticated than that of contemporary wares (Herscher 2003: 218), again suggestive of considerable practice and knowledge, possibly a longer lived technology. The possible and tantalising suggestion of Proto-DPW at Erimi (Herscher 2003: 218) may then go some way to explaining the unique nature of DPW and why WPW was never adopted in the south west; as such a strong ancestral tradition would indeed be hard to break in an already highly regional society. Furthermore, if there does appear to be similarities between Proto-DPW and the *Ammoudhia* sample then I would advocate a comparison with samples from Chalcolithic sites closer to *Ammoudhia*, such as *Kissonerga-Mosphilia* and *Lemba-Lakkous*.

Alternatively, there is also the case of DPW continuing into the Late Cypriot to be considered. As stated previously, the transformation process of Cyprus from small, regionalised villages and towns to large city-states is still imperfectly understood and this material may go some way to aiding understanding of this transition. I would argue that a technological study similar to this one would be beneficial, as the changes, whilst not technological innovations in themselves, may yet be directly related to technology as the demand for Cypriot copper increased and Cypriot society sought ways to exploit their natural resources. Technology (particularly pyrotechnology) would have become important in the smelting of copper and transforming it into ingots, vessels and other items. Until this time, I would argue that pyrotechnology remained if not a closely guarded secret, then at least an important source of knowledge belonging mainly to potters. This assemblage could prove very useful in establishing the relationships between potters, technology and

society and how these relationships changed as technological and social demands changed.

### **Conclusion**

In conclusion, I have endeavoured to show how different approaches to style and ceramic analysis may provide previously unseen evidence. Compared to traditional stylistic analyses which only examine a static finished product, isochrestic variation gives access to the actions of individuals from the past. In this chapter I have summarised the main findings of this isochrestic analysis on the material from *Kissonerga-Ammoudhia*. I have shown how the technological choices made during the manufacturing process of these vessels can be applied to studying the society in which they were made. I have shown also how isochrestic variation and technological choice can be studied so that the entire manufacturing process can be illuminated and better understood, thus making the potters and their traditions clearer and potentially easier to understand and compare with others.

The limited scope of this work has meant that in some cases, more questions than answers have been raised. However, it is always good to recognise new and potentially rich sources of evidence and in the last part of this chapter I have raised what I believe to be important and in some cases necessary areas for further research. This initial work has provided the beginnings of an assemblage catalogue, a database for DPW, insights into new avenues of research and a sound foundation on which future studies can be built.

## BIBLIOGRAPHY

- Åström P. 1972 The Middle Cypriote Bronze Age. *The Swedish Cyprus Expedition, Vol V part 1B* Lund: Sweden.
- Arnold, D. 1985 *Ceramic Theory and Cultural Process*. Cambridge University Press: Cambridge.
- Barlow, J.A. 1989 Red Polished Ware: Towards Clarifying the Categories. *RDAC: Nicosia* (51-59).
- Barlow, J.A. 1994 Notes on Decoration of Red Polished Ware. *RDAC: Nicosia* (45-51).
- Belgiorno, M.R. 2002 Rescue-Excavated Tombs of the Early and Middle Bronze Age from Pyrgos (Limassol). Part 1. *RDAC: Nicosia* (1-33).
- Biers J.C. & Soren D. 1981 *Studies in Cypriote Archaeology*. University of California: LA.
- Birmingham, J. (Ed) 1973 *The Cypriot Bronze Age, Some Recent Australian Contributions to the Prehistory of Cyprus*. National Library of Australia: Sydney.
- Bolger, D. 2003 *Gender in Ancient Cyprus*. AltaMira Press, Walnut Creek: CA.
- Bolger, D., Barlow, J., & King. 1991 *Cypriot Ceramics: Reading the Prehistoric Record*. University of Pennsylvania Press: Philadelphia.
- Bolger, D., McCartney, C., & Peltenburg, E. 2004 Regional Interaction in the Prehistoric West: Lemba Archaeological Project Western Cyprus Survey. *BAR Series*. Archaeopress: Oxford.
- Carpenter, J.R. 1981 Excavations at Phaneromeni 1975-1978, Biers & Soren *Studies in Cypriote Archaeology* (59-78). University of California: Los Angeles.
- Catling, H.W. 1962 Patterns of settlement in Bronze Age Cyprus. *Opuscula Atheniensia* IV (129-69).
- Coleman, J., Barlow, J., Mogelonsky, M. & Schaar, K. 1996 *Alambra: A Middle Bronze Age Settlement in Cyprus*. Paul Åström Forlag: Jonsö.
- Conkey, M.W. & Hastorf, C.A. (Eds). 1990 *The Uses of Style in Archaeology*. Cambridge University Press: Cambridge.



- Darvill, T. & Timby, J. 1982 Textural analysis: a review of potentials and limitations, Freestone, I., Johns, C., Potter, T. (Eds). *Current Research in Ceramics: Thin Section Studies*. British Museum Press: London (73-89).
- David, N, Sterner, J, Gavua, K. 1988 Why Pots are Decorated. *Current Anthropology* 29.
- David, N, Kramer, C. 2001 *Ethnoarchaeology in Action*. Cambridge University Press: Cambridge.
- Duryea, D. 1965 *The Necropolis of Phaneromeni and Its Relations to Other Early Bronze Age Sites in Cyprus*. CAARI: Nicosia.
- Flourentzos, P. 1982 Selected Antiquities of Red Polished Ware from Cypriote Private Collections. *OpAth XIV*: 3
- Frankel, D. 1973 Recent Developments in The Cypriot Middle Bronze Age. J Birmingham (ed) *The Cypriot Bronze Age, some recent Australian contributions to the prehistory of Cyprus*. National Library of Australia: Sydney (23-44).
- Frankel, D. 1974 Inter-site Relationships in the Middle Bronze Age of Cyprus. *World Archaeology Vol 6*: (190-208).
- Frankel, D. 1977 Pottery Decoration as an Indicator of Social Relationships: A Prehistoric Cypriot Example. M Greenhough & V Megaw (Ed) *Art in Society*. Duckworth Press: London.
- Frankel, D. 1981 Uniformity and Variation in a Cypriot Ceramic Tradition, Two Approaches. *Levant* 13 (88-107).
- Frankel, D. 1988 Pottery Production in Prehistoric Cyprus: Assessing the Problem. *Journal of Mediterranean Archaeology* (27-55).
- Frankel D. 1992 Inter and Intrasite Variability and Social Interaction in Prehistoric Bronze Age Cyprus: Types, Ranges and Trends. *BASOR* 292.
- Frankel, D. 1994 Color Variation on Prehistoric Cypriot Red Polished Pottery. *Journal of Field Archaeology*, Vol.21. No.2 (205-219).
- Frankel, D. 2000 Migration and ethnicity in prehistoric Cyprus: technology as Habitus. *European Journal of Archaeology* 3 (167-187).
- Frankel, D. & Webb, J. 1996 *Marki-Alonia, an Early and Middle Bronze Age town in Cyprus; excavations 1990-1994*. Jonsered: Åströms, Studies in Mediterranean Archaeology v.123:1.
- Freestone, I., Johns, C., Potter, T. (Eds). 1982 *Current Research in Ceramics: Thin Section Studies*. British Museum Press: London.

- Gibson, A. & Woods, A. 1997 *Prehistoric Pottery for the Archaeologist*. Leicester University Press: London.
- Gjerstad, E. 1926 *Studies in Prehistoric Cyprus*. Uppsala: Sweden.
- Hadjisavvas, S. 1977 The Archaeological Survey of Paphos. A Preliminary Report. *RDAC*: Nicosia (222-232).
- Hegmon, M. 1992 Archaeological Research on Style. *Annual Review of Anthropology* 21. (517-536).
- Hennessy, J. B. 1973 Cyprus in the Early Bronze Age. *The Cypriot Bronze Age, some recent Australian contributions to the prehistory of Cyprus*. National Library of Australia: Sydney (1-10).
- Herscher, E. 1976 South Coast Ceramic Styles at the End of the Middle Cypriote. *RDAC*: Nicosia (11-19).
- Herscher, E. 1981 Southern Cyprus, The Disappearing Early Bronze Age and the Evidence from Phaneromeni. Biers, J. & Soren, D. *Studies in Cypriote Archaeology*. University of California: Los Angeles (79-85).
- Herscher, E. 1988 Kition in the Middle Bronze Age: The Tombs at Larnaca-Ayios Prodromos. *RDAC*: Nicosia (141-164).
- Herscher, E. 1991 Beyond Regionalism: Towards an Islandwide Early and Middle Cypriot Sequence. Bolger, Barlow & King (Eds), *Cypriot Ceramics, Reading the Prehistoric Record*. University of Pennsylvania Press: Philadelphia.
- Herscher, E. & Fox, S. 1993 A Middle Bronze Age Tomb from Western Cyprus. *RDAC*: Nicosia (69-80).
- Herscher, E. & Swiny, S. 1992 Picking Up the Pieces. Two Plundered Bronze Age Cemeteries. *Studies in Honour of Vassos Karageorghis*: Nicosia (69-93).
- Hodder, I. 1979 Pottery distributions: Service and tribal areas. Millett, M. (Ed) *Pottery and the Archaeologist, Institute of Archaeology Occasional Paper No. 4*, Institute of Archaeology: London (7-25)
- Hodder, I. 1982 *Symbols in Action*. Cambridge University Press: Cambridge.
- Hodder, I. (Ed) 1982 *Symbolic and Structural Archaeology*. Cambridge University Press: Cambridge.
- Hodder, I. 1987 *The Archaeology of Contextual Meaning*. Cambridge University Press: Cambridge.

- Hodder, I. 1990 *Style as Historical Quality*. Conkey, M.W. & Hastorf, C.A. (Eds) *The Uses of Style in Archaeology*. Cambridge University Press: Cambridge.
- Hole, F. 1984 *Analysis of Structure and Design in Prehistoric Ceramics*. *World Archaeology* Vol. 15 No.3 (326-347).
- Irving, A. 2004 *Style and Near Eastern Ceramics*. M Phil Thesis. University of Manchester: Manchester.
- King, R.H. 1987 An investigation of the geographical origins of pottery from southwestern Cyprus and the source materials used in their manufacture. Rupp, D. (Ed). 1987 *Western Cyprus Connections, An Archaeological Symposium, Studies In Mediterranean Archaeology* 77. Paul Åstrom Forlag: Goteborg.
- Knapp, A.B. 1990 Production, location and integration in Bronze Age Cyprus. *Current Anthropology* 31 (2).
- Kramer, C. 1985 Ceramic Ethnoarchaeology. *Annual Review of Anthropology*, Vol. 14 (77-102).
- Lemonnier, P. 1992 *Elements for and Anthropology of Technology*. Museum of Anthropology, University of Michigan: Ann Arbor.
- Lemonnier, P. 1993 *Technological Choices: Transformations in material culture since the Neolithic*. Routledge: London.
- Loney, H.L. 2000 Society and Technological Control: A critical review of models of technological change in ceramic studies. *American Antiquity* Vol. 65, No.4 (646-668).
- MacLaurin, M.L.G, 1980 *Cypriote Red Polished Pottery and its Regional Variations, Vol 1-4*. University of London: London.
- Maliszewski, D. 1997 Notes on the Bronze Age Settlement Patterns of Western Cyprus c2500-c1050 BC. *RDAC*: Nicosia (65-85).
- Manning, S. & Swiny, S. 1994 Sotira-Kaminoudhia and the chronology of the Early Bronze Age in Cyprus. *Oxford Journal of Archaeology* 13 (149-172).
- Merrillees, R.S. 1973 Settlement, Sanctuary and Cemetery in Bronze Age Cyprus. J. Birmingham(Ed), *The Cypriot Bronze Age, some recent Australian Contributions to the prehistory of Cyprus*. National Library of Australia: Sydney (44-58).
- Middleton, A & Freestone I. 1991 *Recent Developments in Ceramic Petrology*. British Museum Occasional Paper 81: London.
- Millett, M. (Ed) 1979 *Pottery and the Archaeologist, Institute of Archaeology Occasional Paper No. 4*. Institute of Archaeology: London.

- Moran, W.L. 1992 *The Amarna Letters*. The John Hopkins University Press: Baltimore.
- Morris, D. 1985 *The Art of Ancient Cyprus*. Phaidon Press: Oxford.
- Olin, J. & Franklin, A. 1982 *Archaeological Ceramics*. Smithsonian Institution Press: Washington D.C.
- Orton, C., Tyers, P. & Vince, A. 1993 *Pottery in Archaeology*. Cambridge University Press: Cambridge.
- Peacock, D.P.S. 1970 The scientific analysis of ancient ceramics: a review. *World Archaeology Vol. 1* (375-389).
- Peltenburg, E. 1983 The Prehistory of Western Cyprus: Ktima Lowlands Investigations 1979-1982. *RDAC* : Nicosia (46-52).
- Peltenburg, E. 1996 From isolation to state formation in Cyprus, 3500-1500 BC. V Karageorghis & D Michaelides, *The Development of the Cypriot Economy*. Lithographics: Nicosia.
- Philip, G. 1983 Kissonerga-Skalia ceramics. Peltenburg E.J. and project members, The Prehistory of Western Cyprus: Ktima Lowlands Investigations 1979-1982. *RDAC*: Nicosia (46-52).
- Plog, S. 1980 *Stylistic Variation in Prehistoric Ceramics*. Cambridge University Press: Cambridge.
- Plog, S. 1983 Analysis of Style in Artefacts. *Annual Review of Anthropology Vol. 12* (125-142).
- Price, N.P.S. 1979 *Early Prehistoric Settlement in Cyprus, 6500-3000 BC*. BAR International Series 65: Oxford.
- Renfrew, C. Bahn, P. 2005 *Archaeology: The Key Concepts*. Routledge: London.
- Rice, P. M. 1984 *Pots and Potters: Current Approaches in Ceramic Archaeology*. Institute of Archaeology, University of California: Los Angeles.
- Rice, P. M. 1987 *Pottery Analysis. A Sourcebook*. University of Chicago Press: Chicago.
- Rupp, D. (Ed). 1987 *Western Cyprus Connections, An Archaeological Symposium, Studies In Mediterranean Archaeology 77*. Paul Åström Forlag: Goteborg.
- Rupp, D., Clarke, J.T., D'Annibale, C.D. & Stewart, S. 1992 Canadian Paliapaphos Survey Project: 1991 Field Season. *RDAC*: Nicosia (285-292).

Rupp, D. (Ed). 1993 The Land of the Paphian Aphrodite Vol. 2. *The Canadian Paliapaphos Survey Project. Studies in Mediterranean Archaeology*, Paul Åstrom Forlag: Goteborg.

Rye, O.S. 1981 *Pottery Technology: Principles and Reconstruction*. Taraxacum: Washington D.C.

Sackett, J.R. 1977 The Meaning of Style in Archaeology: A General Model. *American Antiquity* Vol. 42 (369-380).

Sackett, J.R. 1982 Approaches to Style in Lithic Archaeology. *Journal of Anthropological Archaeology* Vol. 1 (59-112).

Sackett, J.R. 1985 Style and Ethnicity in the Kalahari: A reply to Wiessner. *American Antiquity* Vol. 50, No. 1 (154-159).

Sackett, J.R. 1986 Isochrestism and Style: A Clarification. *Journal of Anthropological Archaeology* Vol. 5 (266-277).

Sackett, J.R. 1990 Style and Ethnicity in Archaeology: the case for isochrestism. Conkey, M.W. & Hastorf, C.A. (Eds) *The Uses of Style in Archaeology*. Cambridge University Press: Cambridge.

Schiffer, M.B, Skibo, J.M. 1997 The Explanation of Artifact Variability. *American Antiquity* Vol. 62, No.1 ((27-50).

Schiffer, M.B, Skibo, J.M, Griffiths, J.L, Hollenback, K.L, Longacre, W.A. 2001 Behavioural Archaeology and the Study of Technology. *American Antiquity* Vol. 66. No.4 (626-637).

Schlangar, N. 2005 *The Chaine Opératoire*. Renfrew & Bahn. *Archaeology: The Key Concepts*. Routledge: London.

Shepard, Anna O. 1956 *Ceramics for the Archaeologist*. Carnegie Institution of Washington: Washington D.C.

Sneddon, A. 2002 The Cemeteries at Marki: Using a Looted Landscape to Investigate Prehistoric Bronze Age Cyprus. *BAR International Series 1028*, Archaeopress: Oxford.

South, A. 1987 Contacts and contrasts in Late Bronze Age Cyprus: The Vasilikos Valley and the west. Rupp, D. (Ed). 1987 *Western Cyprus Connections, An Archaeological Symposium, Studies In Mediterranean Archaeology* 77. Paul Åstrom Forlag: Goteborg.

Steel, L. 2004 *Cyprus Before History*. Gerald Duckworth & Co. Ltd: London.

- Stewart, J.R.B. 1962 The Early Cypriote Bronze Age. *Swedish Cyprus Expedition IV: 1A*: Lund
- Swiny, S. 1981 Bronze Age Settlement Patterns in Southwest Cyprus. *Levant Vol. 13*, (51-88).
- Swiny, S. 1986 *The Kent State University to Episkopi Phaneromeni, Studies in Mediterranean Archaeology Vol LXXIV:2*, Nicosia.
- Swiny, S., Rapp G., Herscher E. 2003 Sotira *Kaminoudhia* An Early Bronze Age Site in Cyprus. *CAARI Monographs Vol. 4*. ASOR: Boston, MA
- Todd, I. 1985 A Middle Bronze Age Tomb At Psematismenos-Trelloukkas. *RDAC*: Nicosia (61-71).
- Todd, I. 1986 Vasilikos Valley Project 1: The Bronze Age Cemetery In Kalavassos Village, *Studies in Mediterranean Archaeology Vo. LXXI:1*, Paul Åstrom Forlag: Sweden.
- Todd, I. 1988 The Middle Bronze Age in the Kalavassos Area. *RDAC*: Nicosia (133-140).
- Washbourne, R.M., 2000 *Out of the Mouths of Pots*. Paul Åstroms Forlag: Jonsered, Sweden.
- Webb, J. 1992 Funerary Ideology in Bronze Age Cyprus – Towards the Recognition and Analysis of Cypriote Ritual Data. *Studies in Honour of Vassos Karageorghis*. Nicosia (87-101).
- Webb, J. & Frankel, D. 2001 Eight Middle Bronze Age Tomb Groups from Dheni. *University of New England Museum of Antiquities, Corpus of Cypriote Antiquities 21*, *Studies in Mediterranean Archaeology*. Paul Åstrom Forlag: Sweden.
- Wiessner, P. 1983 Style and social information in Kalahari San projectile points. *American Antiquity Vol. 48* (253-276).
- Wiessner, P. 1985 Style or isochrestic variation? A reply to Sackett. *American Antiquity Vol. 50* (160-166).
- Wiessner, P. 1990 Is There a Unity to Style? Conkey, M.W. & Hastorf, C.A. (Eds) *The Uses of Style in Archaeology*. Cambridge University Press: Cambridge.
- Williams, D.F. 1979 Ceramic petrology and the archaeologist. Millett, M. (Ed) 1979 *Pottery and the Archaeologist, Institute of Archaeology Occasional Paper No. 4*, Institute of Archaeology: London (73-77).

Wobst, H. M. 1977 Stylistic behaviour and information exchange. C. Cleland (Ed.)  
*For the Director: Research Essays in Honour of James B. Griffin.* University of  
Michigan: Ann Arbor.

## CATALOGUE

### TOMB 5

#### VESSELS

**P5.1.** Drab Polished tankard. Fig 13. H: 17.9; D: 12.8. Broken, repaired, round base, round body, concave neck, round flaring rim. High vertical handle round in section from rim to upper body, undecorated. Hard reddish yellow fabric with thick defined dark blue core with few small white inclusions. Medium reddish yellow slip inside and out, with some lustre but quite worn. Munsell 5YR 6.6.

**P5.2.** Drab Polished juglet. Fig 14. H: 8.7; D: 5.8. Complete. Pointed base, squat round body, concave neck, round backward sloping rim. High vertical handle, round in section from rim to upper body. Small horizontal rounded knob on opposing side to lower handle attachment, body decorated with pairs of impressed circles with central dots separated by sets of four horizontal lines enclosing three lines of four dots. Lower neck decorated with two horizontal bands enclosing row of dots, upper neck decorated with impressed circles and dots. Interior fabric not visible, medium pink slip with slight lustre and distinct grey mottling. Munsell 5YR 7/3.

#### DIAGNOSTICS

**P5.3.** Red Polished Coarseware wide necked jug. Fig. 15. H: 22.9; D: 10.7. Broken, repaired, incomplete. Roundish body, concave neck, open round rim. Vertical handle, squarish in section from rim to upper body, grooved at upper attachment, otherwise undecorated. Coarse hard dark red fabric with many small white and a few large black inclusions, very worn red slip with distinct grey/black mottling inside and reddish brown out. Munsell inside 10R 4/6, outside 2.5YR 4/4.

**P5.4.** Drab Polished closed vessel (jug). Fig. 16. H: 16.4; D: 17.0. Broken, repaired, incomplete only body remaining. Pointed base slightly off axis, round body. Undecorated. Hard orange/brown fabric with thick defined dark blue core with medium amount of small white, medium black and large red inclusions. Medium pink/orange slip with some lustre but very worn. Munsell 2.5YR 5/6.

**P5.5.** Drab Polished jug. Fig. 17. H: 25.6; D: 19.0. Broken, repaired, incomplete, only shoulder, neck and upper handle attachment remaining. Roundish body, round horizontal spout with flaring rim, handle round in section from midneck to upper body. Undecorated. Hard thick dark blue core with medium amount of small/medium white inclusions. Medium red slip with a slight lustre. Munsell 5YR 6/6.

**P5.6.** Drab Polished small bowl. Fig.18. H: 9.6; D: 16.0. Broken, repaired, incomplete. Round base, squat ovoid body, round horizontal mouth with slightly incurved rim, most of handle missing but suggests a horizontal handle, oval in section below rim. Small horizontal pointed knob below rim on opposing side from



handle, otherwise undecorated. Medium dark red/brown fabric with few medium black inclusions, thin reddish yellow slip with very slight lustre, poorly preserved. Munsell 7.5YR 6/4.

**P5.7.** Drab Polished jug neck and spout. Fig. 19. H: 12.2; D: 7.0. Broken, repaired, incomplete. Concave neck, round horizontal spout with flaring rim. Upper handle attachment midneck. Lower neck decorated with six incised horizontal lines. Light grey blue core with many small white inclusions. Medium yellowish red slip, very worn. Munsell 5YR 5/6.

**P5.8.** Drab Polished jug neck and spout. Fig. 20. H: 13.6; D: 6.4. Broken, repaired, incomplete. Slightly concave neck, cutaway spout. Vertical handle oval in section from rim to upper body, handle pushed through body. Undecorated. Thick dark blue core with few large black inclusions. Medium light reddish brown slip. Munsell 5YR 6/4.

**P5.A.** Drab Polished base sherd, closed vessel. Fig. 21. H: 5.4; D: 11.2. Flat base. Coarse hard light blue core with many large black inclusions, medium reddish yellow slip. Munsell 5YR 6/5.

**P5.B.** Red Polished Coarseware base, open vessel. Fig. 22. H: 6.9; D: 6.8. Three footed base with one foot missing. Coarse hard red fabric with many small white and black and large red inclusions, dark reddish gray slip with some grey mottling and possible evidence of burning on base but encrusted and poorly preserved. Munsell 2.5YR 4/6, base 10R 4/1.

**P5.C.** Drab Polished body sherd, closed vessel. Fig. 23. H: 5.4; D: 4.5. Body sherd with relief of narrow horizontal line, possibly a snake? Medium grey/blue core and few small white inclusions, medium reddish yellow slip. Munsell 5YR 6/6.

## **TOMB 10**

### **VESSELS**

**P10.1** Drab Polished small bowl. Fig. 24. H: 10.2; D: 16.7. Complete. Round base, hemispherical body, plain rim. Horizontal handle round in section from below rim. Opposing conical lug with thin incised line decoration. Medium light red fabric with a slight lustre and slight mottling. Surface pitted and two large air bubbles have flaked off either side of handle. Munsell 2.5YR 6/8.

**P10.2** Drab Polished small bowl. Fig. 25. H: 9.9; D: 15.7. Complete. Round base, very worn, hemispherical body, thinning incurved rim. Horizontal handle, rounded in section with inner side flattened from below rim. Damaged lug rising from rim opposing handle. Medium soft reddish yellow fabric with few large and medium white inclusions, thick, diffuse light blue core. Thin light red slip with slight lustre and distinct areas of mottling, very worn with large white inclusions showing through. Munsell 7.5YR 7/6.

**P10.3** Red Polished small bowl. Fig. 26. H: 10.0; D: 16.5. Complete. Round base heavily scratched, hemispherical body, incurved rim, small vertical loop handle rising from rim, rounded in section with flattened inner side. Opposing lug. Light reddish brown fabric with few small white inclusions and organic temper, very thin light grey diffuse core visible. Thin light red slip with no lustre and slight mottling on base, organics on slip. Munsell 2.5YR 6/4.

**P10.4** Red Polished Ring Based Bowl (Cult Vessel). Fig. 27. H: 10.0; D: 14.3. Complete. Flanged rim base, hemispherical body, incurving thinning round rim, low vertical, triangular handle, rectangular in section. Handle visibly pinched together at end. Zoomorphic opposing lug just below rim, two sets of legs(?) and head, lowest set of limbs have four lines etched on underside. Relief snake decoration across body of vessel, parallel upper and lower lines with sectioning lines snakes and straight lines between creating panels. Medium soft reddish yellow fabric with few medium black inclusions and gold mica ?? Thin slip with slight lustre evident from reliefs. Crudely constructed vessel with very uneven rim and base. Munsell 5YR 6/6.

**P10.5** Drab Polished small bowl. Fig. 28. H: 10.4; D: 16.4. Complete. Round base, hemispherical body, incurving thinning rounded rim, high vertical loop handle, rounded rectangular in section. Plain lug opposing handle just below rim. Interior fabric not visible but thick defined dark blue core present with medium amount of medium black and white inclusions, organic temper. Thin pink slip with slight lustre although very worn. Munsell 5YR 7/4.

**P10.6** Drab Polished jug. Fig. 31. H: 33; D: 20.2. Incomplete, tip of spout missing. Round base, globular body, concave neck, cutaway spout, low vertical handle, round in section from rim to upper body, handle not straight. Two nipple lugs on opposing sides of upper handle, one approx 1cm higher than other. Inverted 'V' shaped relief decoration directly below lower part of handle. Circular puncture in side of body. Medium hard light olive brown fabric with few small black inclusions, very thin reddish yellow medium lustre slip. Munsell 2.5YR 5/3, 5YR 6/6.

**P10.7** Drab Polished large bridge spouted bowl. Fig. 29. H: 17.2; D: 33.6. Complete. Round base, hemispherical body, bridge cutaway spout with incised vertical lug above, incurving constant flattened rim, horizontal loop handle, rounded in section, curving inwards. Medium soft light red fabric with medium small white and few medium black inclusions. Thick diffuse light blue core, thick light red slip with medium lustre, chipped away in patches, fine texture. Munsell 7.5YR 6/6.

**P10.8** Red Polished jug. Fig. 32. H: 43.8; D: 32.3. Complete. Round base, slightly ovoid body, concave neck, round flaring thinning rim, low vertical handle from midneck to upper body, round in section. Coarse brownish yellow fabric with few small white, few medium black and medium large red inclusions. Medium diffuse light grey core. Thin, yellowish brown slip with a slight lustre and mottling. Munsell 10YR 6/6, 10YR 5/6.

**10.9** Red Polished juglet. Fig. 33. H: 7.0; D 6.5. Broken, repaired, incomplete. Knob base, body missing, concave neck, round spout with flaring rim, vertical handle, round in section, from rim to upper body. Nipple opposing handle base, incised line decoration from inside rim to handle. Medium soft reddish yellow fabric with few small white inclusions and a thin dark grey diffuse core. Thin brownish yellow slip with a heavily worn medium lustre. Munsell 10YR 6/6.

**10.10** Red Polished small bowl. Fig. 30. H: 6.0; D 12.0. Broken, repaired, incomplete. Base missing but sides curving suggest rounded base, parts of body missing but hemispherical shape evident. Incurving thinning round rim, high vertical loop handle, round in section, from rim. Opposing partial incised lug, straight line incision on both lug and top of handle. Medium soft brownish yellow fabric with few small white and medium large red inclusions, no core visible. Munsell 10 YR 6/6.

**P10.11** Drab Polished juglet. Fig. 34. H: 12.2; D: 7.7. Complete. Misshapen round base, round body, slightly concave neck, round spout with flaring, thinning pointed rim, low vertical handle, round in section, dropping from rim to upper body. Interior fabric not visible. Thin reddish yellow slip with a medium worn lustre, crudely shaped vessel. Munsell 7.5YR 5/8.

**P10.12** Drab Polished juglet. Fig. 35. H: 12.5; D: 8.0. Complete. Round base, round body, straight neck with round flaring spout and thinning rounded rim. Low vertical handle from rim with slight knuckle at top, round in section. Opposing nipple below base of handle. Interior fabric not visible. Brownish yellow slip with a medium lustre. Munsell 10 YR 6/6.

**P10.13 & 13a** Coarse Ware tripod cooking pan. Fig. 36. Pan H: 5.9; D: 25.0; Foot H: 6.8; D: 7.1; Th: 1.8. Incomplete. Flat base with three legs, straight thinning round rim, very misshapen. Yellow brown fabric with many very large black, red, white, grey and brown inclusions. Thick red brown matt slip on interior and upper exterior rim, heavily cracked. Light brown exterior, rope or basket impressions on base with rows of perforations c. 10mm deep. Heavy burning evident at base and interior of foot and base. Munsell fabric: 10YR 6/4; Interior: 2.5YR 6/6; Exterior: 5YR 6/4.

## **DIAGNOSTICS**

**P10.A** Drab Polished rim sherd from open vessel. Fig. 37. H: 6.2; D: 13.0 (vessel d: 15.5). Incurving rounded rim, horizontal loop handle, round in section with flattened underside, from below rim. Medium hard brownish yellow fabric with few small red and white inclusions and a medium light blue defined core. Thin matt slip, brownish yellow exterior, pink interior. Munsell 10YR 6/6, 5YR 7/4.

**P10.B** Drab Polished jug sherd. Fig. 38. H: 14.7; D: 7.5. Cutaway spout with low vertical handle from rim, rim thickens before rounded end. Fabric not visible, thick light blue defined core with many medium black inclusions and organics. Thin slip with slight lustre ranging in colour from grey to pink grey. Munsell 5Y 4/1, 5Y 5/2.

**P10.C** Red Polished body sherd from open vessel. Fig. 39. H: 3.0; D: 4.9. Broken off handle attachment shows oval section. Medium hard red fabric with medium small black and white, few large red and few small gold mica inclusions. Medium red slip with a medium lustre. Munsell 2.5YR 5/8.

**P10.D & E** Red Polished coarse ware sherds from large open vessel. Figs. 40 & 41. H: 2.6; D: 7.8. Rim thinning, flat ended, slightly extending inwards. Coarse medium soft, reddish orange fabric with many medium and large red and a medium amount of small medium and large black inclusions. Thick dark grey diffuse core, medium att slip with slight mottling, red exterior and reddish orange interior. Munsell 5YR 5/8, 10R 4/6.

**P10.F** Drab Polished small handle sherd. Fig. 42. H: 4.8; D: 0.9. Curved handle sherd, round in section. Medium soft light red fabric with medium small and medium white and few small and medium black inclusions. Thick dark grey diffuse core. Thin light red high lustre slip. Munsell 2.5YR 4/8.

**P10.G** DPBC handle sherd. Fig. 43. H: 9.5; D: 3.4. Large handle sherd possibly connecting to rim of pithos? Round in section. Medium hard coarse red fabric with many small medium and large black inclusions. Thick dark grey diffuse core, thin red slip with high lustre. Munsell 10R 4/6.

**P10.H** Drab Polished rim sherd from closed vessel. Fig. 44. H: 4.5; D: 10.0. Partial round mouth, flaring thinning and rounded rim. Hard red fabric with few small black, red and white inclusions with burnt out organics. Thick grey defined core. Thin reddish yellow slip on interior and light red on exterior with slight lustre. Munsell fabric: 2.5YR 5/6; Interior: 5YR 6/6; Exterior: 2.5YR 6/6.

## **TOMB 15**

### **VESSELS**

**P15.1.** Drab Polished flask. Fig. 47. H: 14.4; D: 8.5. Complete. Pointed base, globular body, widening neck, round flaring rim; two opposed elongated vertical lugs with flaring ends, two piercings on rim, impressed decoration on upper body of circles with central dots and pairs of incised vertical lines containing vertical line of nine dots. Horizontal incised pair of lines containing dots at base of neck with circles and dots higher on neck. Interior fabric not visible, medium pink/brown slip with slight lustre and distinct red, yellow and black mottling, Munsell 5YR 7/6, 2.5YR 4/6,. Well preserved.

**P15.2.** Red Polished juglet. Fig. 58. H: 16.1; D 8.5. Complete. Nipple base, globular body, slightly concave neck, cutaway spout, high vertical handle, round in section, from rim to upper body. Small pointed knob on upper body on opposite side of lower handle attachment, otherwise undecorated. Interior fabric not visible,

medium pink/orange slip with slight lustre and distinct red and dark reddish grey mottling. Munsell 2.5Yr 5/6, 2.5Yr 4/1. Well preserved.

**P15.3.** Drab Polished juglet. Fig. 49. H: 8.2; D 5.5. Incomplete, rim missing. Pointed base, round body, slightly concave neck; high vertical handle, oval in section from rim to upper body. Knob on opposite side to handle, otherwise undecorated. Interior fabric not completely visible, but thick diffuse blue core with many small white and small/medium black inclusions. Thin red/red yellow lustrous slip with slight black mottling, Munsell 5Yr 5/6, 2.5Yr 5/8, well preserved.

**P15.4.** Drab Polished juglet. Fig. 50. H: 8.6; D 6.0. Complete. Rounded base, globular body, slightly concave neck, round flaring rim; high vertical grooved handle, round in section from rim to upper body, handle considerably off axis. Small pointed horizontal knob on upper body on opposite side to lower handle attachment, decoration on body of impressed circles with central dots and pair of vertical incised lines containing six dots; two incised lines at base of neck and impressed circles with central dots higher on neck. Interior fabric not visible, thin worn reddish grey slip with some black and red mottling, Munsell 5YR 7/3, 5YR 4/1.

**P15.5.** Drab Polished juglet. Fig. 51. H: 9.0; D 5.0. Complete. Pointed base, ovoid body, slightly upwards tapering neck, round straight rim; vertical handle, round in section from rim to upper body. Small pointed horizontal knob on upper body on opposite side to lower handle attachment, otherwise undecorated. Interior fabric not visible, worn dark reddish gray slip with distinct black and red mottling, Munsell 2.5YR 4/1, 10R 4/6.

**P15.6.** Drab Polished juglet. Fig. 52. H: 7.8; D 5.1. Complete. Round base, squat globular body, concave neck, round flaring rim. High vertical handle, round in section from rim to upper body, considerable off axis. Small vertical pointed knob on upper body on opposite side to lower handle attachment, decoration of circles with central dots on upper and lower body separated by pair of horizontal incised lines containing impressed dots; similar band at base of neck with circles with central dots higher on neck; decorations filled with white material. Interior fabric not visible, worn yellowish red with slight lustre and distinct reddish brown and black mottling, Munsell 5YR 5/6, 5YR 3/2.

**P15.7.** Drab Polished juglet. Fig. 53. H: 5.8; D: 4.2. Complete. Pointed base, squat ovoid body, concave neck, round flaring rim. High vertical handle, round in section from rim to upper body. Small rounded horizontal knob on centre of body on opposite side of lower handle attachment, lower and upper body decorated with impressed circles with central dots, separated by a deeply incised horizontal line, two horizontal bands enclosing dots at base of neck and impressed circles with central dots on upper neck, decorations filled with white material. Interior fabric not visible, thin, slightly lustrous slip with distinct mottling from very dark gray to reddish brown, Munsell 5YR 3/1, 5YR 4/4.

**P15.8.** Red Polished juglet. Fig. 54. H: 7.2; D: 4.5. Complete. Pointed base, ovoid body, concave neck, round backward sloping, flaring rim. High vertical grooved

handle, round in section from rim to upper body. Small pointed horizontal knob on upper body on opposite side to lower handle attachment, upper body decorated with impressed circles with central dots and sets of four small incised horizontal lines and sets of three incised horizontal bands enclosing two lines of dots. Neck decorated with sets of circles and dots and sets of short horizontal lines. Interior fabric not visible, thin, worn reddish/yellow slip with slight lustre. Munsell 5YR 6/6.

**P15.9.** Black Slip juglet. Fig. 55. H: 10.4; D: 6.9. Complete. Pointed base slightly off axis, round body, concave neck, round flaring rim. Vertical handle, round in section from midneck to upper body. Small extremely pointed vertical knob on upper body on opposite side to lower handle attachment, otherwise undecorated. Interior fabric not visible, worn very dark grey slip with very slight reddish mottling. Munsell 5YR 3/1.

**P15.10.** Drab Polished flask. Fig. 48. H: 12.7; D: 9.2. Incomplete, rim missing; pointed base. Squat rounded body, cylindrical neck. Two opposed elongated vertical lugs with flaring ends, body decorated with vertical pairs of impressed circles with central dots separated by pairs of vertical incised bands containing lines of fourteen dots, upper body decorated with sets of two short horizontal bands enclosing four dots, base of neck decorated with two horizontal bands enclosing dots (the remains of which also appear on the upper neck) and the neck is decorated with circles with central dots. Interior fabric not completely visible but a thick, defined dark blue core present. Thin reddish yellow slip with a slight lustre and slight red and dark gray mottling. Munsell 5YR 7/6, 5YR 4/2.

**P15.11.** Drab Polished jug. Fig. 59. H: 25.3; D: 13.6. Broken, repaired. Pointed base, round body, concave neck, cutaway spout with forked rim, vertical handle, round in section from rim to upper body, handle pushed through body. Vertical rounded knob on upper body opposing lower handle attachment, otherwise undecorated. Thin, hard reddish brown clay with thin, defined dark blue core, medium amount of small white inclusions and a few medium red inclusions. Medium reddish brown slip with some lustre, very worn. Munsell 2.5YR 5/6.

**P15.12.** Drab Polished jug. Fig. 65. H: 32.4; D: 21.6. Broken, repaired, incomplete. Pointed base, round body, concave neck, round flaring spout. Vertical handle, round in section from midneck to upper body, handle pushed through body. Small vertical pointed knob on upper body, opposing lower handle attachment, otherwise undecorated. Hard fabric very worn with a thick, light blue defined core and few small black inclusions. Thick reddish yellow slip worn but evidence of medium lustre and distinct red and gray mottling. Munsell 5YR 6/6, 2.5YR 5/6, 5YR 5/1.

**P15.13.** Drab Polished juglet. Fig. 56. H: 10.6; D: 6.8. Broken, repaired, incomplete. Pointed base, squat ovoid body, concave neck, round flaring spout. High vertical grooved handle, round in section from rim to upper body, handle pushed through body. Small horizontal rounded knob on upper body, opposing lower handle attachment, body decorated with impressed circles with central dots and long vertical lines with short horizontal lines emanating from sides. Band of two horizontal lines enclosing dots at base of neck and three bands enclosing two rows of dots higher up

neck with concentric circles between. Hard pinkish brown clay with many medium/large red black and white inclusions and thick dark blue core; thin dusky red slip with medium lustre but worn in places, very slight grey mottling. Munsell 2.5YR 5/6, 2.5YR 3/2.

**P15.14.** Drab Polished small bowl. Fig. 45. H:5.4; D: 9.5. Broken, repaired. Round base, irregular hemispherical body, plain rim. High vertical handle, round in section from rim to lower body. Small conical knob on upper body, opposing upper handle, otherwise undecorated. Medium pink/brown fabric with many medium/large black red and white inclusions and thick defined dark blue core; medium light reddish brown slip present but extremely worn, evidence of slight dark gray mottling. Munsell 2.5YR 6/4, 5YR 3/1.

**P15.15.** Drab Polished jug. Fig. 60. H: 19.8; D: 11.6. Broken, repaired, incomplete. Pointed base, ovoid body, concave neck, cutaway spout with slightly flaring rim. High vertical handle, round in section from rim to upper body, handle pushed through body. Small pointed vertical knob at base of handle and small rounded horizontal knob on opposite side, otherwise undecorated. Medium/hard fabric with medium amount of small red and white inclusions and thick diffuse light blue core. Medium yellowish red worn slip with slight lustre and slight reddish gray mottling. Munsell 5YR 5/6, 2.5YR 5/1.

**P15.16.** Red Polished bowl. Fig.46. H: 6.4; D: 13.1. Broken, repaired, incomplete. Round base, irregular hemispherical body, plain rim. High horizontal handle, oval in section from below rim to upper body. Undecorated. Medium light red fabric with medium amount of small and medium white and red inclusions. Thin red slip but very worn, poorly preserved. Munsell 2.5YR 6/6 (in) 2.5YR 5/6 (slip).

**P15.17.** Drab Polished jug. Fig. 61. H: 24.6; D: 15.5. Broken, repaired, incomplete. Pointed base, round body, concave neck, cutaway spout. High vertical grooved handle (some handle missing), round in section from rim to upper body, handle pushed through body. Small horizontal rounded knob below lower handle attachment and a more pointed, vertical knob on opposing side, otherwise undecorated. Hard grey/blue core with no evidence of other fabric with few small/medium white inclusions. Evidence of a medium yellowish red slip with gray mottling but extremely encrusted and worn. Munsell 5YR 5/6, 5YR 5/1.

**P15.18.** Drab Polished jug. Fig.62. H: 26.9; D: 14.4. Broken, repaired, incomplete. Pointed base, round body, concave neck, cutaway spout. Vertical handle, round in section from rim to upper body, handle pushed through body. Small horizontal knob below lower handle attachment and a more pointed, vertical knob on opposing side, otherwise undecorated. Hard dark blue core with few small red and white inclusions. Thin/medium red slip, worn but with slight lustre and some orange and brown mottling. Munsell 2.5YR 5/6.

**P15.19.** Drab Polished jug. Fig. 63. H: 21.3; D: 11.9. Broken, repaired, incomplete. Pointed base, rounded body, concave neck, cutaway spout. Vertical handle, round in section from rim to upper body, handle pushed through body. Small rounded

horizontal knob on upper body on opposing side to lower handle attachment. There may have been one below handle too but vessel incomplete, otherwise undecorated. Hard orange/brown fabric (2.5YR 6/8) with thick defined dark blue core with few medium/small white inclusions. Medium red slip with some dark gray mottling, very worn and poorly preserved. Munsell 2.5YR 5/6, 5YR 4/1.

**P15.20.** Drab Polished jug. Fig. 64. H: 24.6; D: 10.8 (remaining). Broken, repaired, incomplete. Extremely pointed base, slightly off axis, rounded body, concave neck, cutaway spout. Vertical handle, round in section from rim to upper body, handle pushed through body. Small vertical pointed knob on upper body, opposing side to lower handle attachment, otherwise undecorated although vertical lines are present indicating a process during construction. Hard pink/brown fabric with some small white and black inclusions and a thick light blue core. Medium red slip with some lustre but very worn and poorly preserved. Munsell 2.5YR 6/4 (fabric) 2.5YR 5/6 (slip).

**P15.21.** Drab Polished juglet. Fig. 57. H: 8.1 (remaining); D: 6.2. Broken, repaired, incomplete. Roundish body, concave neck, round flaring spout. Vertical handle, round in section with handle pushed through body. Small horizontal pointed knob on upper body on opposing side to lower handle attachment, body decorated with sets of two incised vertical lines enclosing vertical line of dots, these are separated by impressed circles with central dots, also horizontal band at lower neck. Hard thick diffuse light blue core with few small white inclusions. Thin yellowish red slip with medium lustre and some distinct dark grey mottling. Munsell 5YR 5/6, 2.5YR 4/1.

## **DIAGNOSTICS**

**P15.A.** Drab Polished rim sherd from small open vessel. Fig. 66. H: 5.6; D: 2.1. Incurved rim, suggesting pot diameter of 9cm, undecorated. Hard light blue core with few small black red and white inclusions. Thin reddish yellow slip inside and pink out with slight lustre. Munsell 5YR 6/6 (inside) 5YR 7/3 (outside).

**P15.B.** Red Polished rim sherd, from open vessel. Fig. 67. H: 3.0; D: 3.0. Incurved rim suggesting pot diameter of 13cm, undecorated. Hard pink/brow fabric with some medium black and white inclusions. Thin dark reddish gray slip with slight lustre. Munsell 2.5YR 6/4 (fabric) 5YR 4/2 (slip).

**P15.C.** Red Polished rim sherd from open vessel. Fig. 68. H: 3.2; D: 3.7. Incurved rim suggesting pot diameter of 18cm, decoration of incised pair of vertical lines enclosing line of dots and impressed circle with central dot. Medium red fabric with few small black and large white inclusions. Medium light red slip with some lustre. Munsell 2.5YR6/6 (slip) 2.5YR 5/6 (fabric).

**P15.D.** Red Polished lug sherd. Fig. 69. H: 3.9; D: 1.0. Round in section, decorated with incised vertical line with short horizontal lines emanating. Hard red fabric with few small red inclusions, medium red slip with slight lustre. Munsell 2.5YR 5/6 (fabric), 2.5YR 6/6 (slip).



**P15.E.** Drab Polished rim sherd from round necked small vessel. Fig. 70. H:1.3; D: 2.4. Everted rim with thinning profile, showing incised horizontal line at neck/spout connection. Dark blue core extremely worn, thin reddish brown slip with some lustre. Munsell 5YR 5/3.

**P15.F.** Red Polished body sherd of small closed vessel (juglet?) Fig. 71. H: 3.7; D:2.2. Extremely curved body sherd suggesting small round body. Lower handle attachment present, pushed through body. Undecorated. Soft reddish yellow fabric with many small and medium white inclusions, thin reddish yellow slip present but very worn. Munsell 5YR 6/6. May be part of same vessel as P15.G.

**P15.G.** Red Polished body sherd of small closed vessel (juglet). Fig. 72. H: 1.9; D: 2.5. Extremely curved body sherd suggesting small round body. Decorated with horizontal deeply incised band with row of impressed circles below. Soft reddish yellow fabric with many small and medium white inclusions, thin yellowish red slip present but very worn. Munsell 5YR 5/6, lower part of outer sherd a pinkish gray colour – 5YR 7/4. May be part of same vessel as P15.F.

**P15.H.** Drab Polished rim/body sherd of small open bowl. Fig. 73. H: 4.0; D 5.6. Incurved rim suggesting pot diameter of 10cm. Upper handle present suggesting a high vertical handle, round in section. Undecorated. Hard dark blue core with many small white inclusions, thin red slip with dark reddish gray mottling but poorly preserved. Munsell 2.5YR 5/8, 10R 4/1.

**P15.I.** Drab Polished spout sherd? Fig. 74. H: 3.1; D: 2.0. No curving and extreme thickness of sherd (1cm) suggest part of a cutaway spout rather than a rim sherd. Undecorated. Dark blue core with medium amount of small white inclusions, medium lustrous yellowish red slip present. Munsell 5YR 5/6.

**P15.J.** Drab Polished spout sherd? Fig. 75. H: 4.2; D: 2.5. No curving and extreme thickness of sherd (1cm) suggest part of spout rather than a rim sherd. Undecorated. Dark blue core with many black red and white inclusions, a medium red slip is present but poorly preserved. Munsell 2.5YR 5/6.

### **SMALL FINDS**

**S15.1.** Part of stone pendant. H: 3.5; D:1.8; Th. 0.6. Broken, one side of pendant, S15.2 represents the other side. Circular hole cut 1.1cm from top.

**S15.2.** Part of stone pendant. H: 4.2; D: 1.8; Th. 0.6. Broken, one side of pendant, S15.1 represents the other side. Circular hole cut 1.1cm from top.

**S15.3.** Cuboid stone. H:2.0; D: 2.0; Th; 2.2.

**S15.4.** Rectangular shapes stone. H: 8.5; D: 3.6; Th. 1.1.

**S15.5.** Ovoid stone. H: 6.5; D: 4.2; Th: 2.6. Three striations going round whole stone, may have occurred naturally.

**S15.6.** Ovoid stone. H: 6.0; D: 3.9; Th: 2.2. Small circular hole appears on one side halfway up.

**S15.7.** Ovoid stone. H: 6.7; D: 4.6; Th: 2.3.

## **TOMB 16**

### **VESSELS**

**P16.1** Red Polished bowl. Fig. 76. H: 5.5; D: 11.0. Broken, repaired 95% complete. Round base, hemispherical body, incurved thinning round rim. Low vertical loop handle, round in section, from underside of elongated lug. Incised decorated elongated rectangular tablet lug below rim with handle attachment below. L: 4.3; D: 1.3; Th: 1.3. Incised line from tip along centre with pairs of small lines on each side along entirety, 8 on one side, 9 on the other. Rounded rectangular section tapering slightly. Opposing lug L: 3.1; D: 1.4; Th: 1.8, similar decoration but thicker example with offset decoration. Medium light red fabric with medium small white and few large red inclusions and a thin light red slip with slight lustre, slightly darker on inside. Munsell 2.5YR 6/8-7/8.

**P16.2** Drab Polished juglet. Fig. 85. H: 12.1; D: 7.8. Broken, repaired, incomplete. Knob base, ovoid body, concave neck round flaring rim. Vertical loop handle, round in section from mid neck. Undecorated. Hard reddish yellow fabric with many small black and few medium white inclusions, thick defined blue core with no discernable inner edge. One large white inclusion on surface. Thin mottled slip from brownish yellow to dark reddish grey with slight lustre. Munsell fabric: 5YR 6/8; slip: 10YR 6/6, 2.5YR 4/1.

**P16.3** Red Polished juglet. Fig. 91. H: 12.2; D: 8.3 (remaining). Broken, repaired, 95% complete, handle and tip of spout missing. Rounded base with small nipple, slightly concave neck, cutaway spout. Undecorated. Medium soft yellow fabric with few small white inclusions and a thin yellow slip with slight/medium lustre. Munsell 10YR 7/6.

**P16.4** Red Polished small bowl. Fig. 77. H: 5.8; D: 9.5. Broken, repaired, complete except for a missing lug. Round base, hemispherical body, round incurved rim. Horizontal wishbone handle, round in section, from below rim, opposing lug missing. Medium soft reddish yellow fabric with medium amount of small and medium white inclusions, a thin defined grey core and a thin reddish yellow matt slip. Munsell 7.5YR 6/8.

**P16.5** Drab Polished small bowl. Fig. 78. H: 5.9; D: 10.7. Broken, repaired, 90% complete. Round base, misshapen hemispherical body. Horizontal wishbone handle, round in section, from below rim and curving slightly above rim, fishtail ended with

incised decoration of parallel lines running at right angles to edge of handle and on each side of one longer dividing line at the end. Opposing elongated horizontal lug, rectangular in section, from below rim and curving upwards, incised decoration comprising of four lines across top of lug and four shorter lines at right angles to the end. Medium hard fabric with few small white inclusions, thin slip with slight lustre and defined mottling varying from grey to light red. White inclusions erupting on surface and four large air bubbles visible. Munsell 7.5YR 6/1, 2.5YR 6/6.

**P16.6** Drab Polished juglet. Fig. 92. H: 15.2; D: 7.8. Broken, repaired, complete. Round base with slight point, ovoid body, concave neck, cutaway spout. Vertical handle, round in section, from rim to upper body. Pinched lug at base of handle and opposing nipple, otherwise undecorated. Medium hard red fabric with many medium and large white and few large red inclusions, dark blue thick defined core, evidence of a thin worn mottled slip ranging from reddish yellow to grey. Munsell fabric: 2.5YR 5/8; slip: 7.5YR 7/6, 7.5YR 6/1.

**P16.7** Drab Polished juglet. Fig. 93. H: 13.5; D: 8.1. Broken, repaired, complete except for tip of spout. Nipple base, globular body, concave neck, cutaway spout. Vertical handle, round in section and thrust into body. Opposing small nipple, otherwise undecorated. Medium fabric with a thick grey defined core. Worn medium reddish yellow slip with a slight lustre and slight mottling. Munsell 7.5YR 6/6.

**P16.8** Drab Polished juglet. Fig. 94. H: 13.8; D: 7.1 (remaining). Broken, repaired, incomplete. Round base with slight point, ovoid body, concave neck, cutaway spout. High vertical handle, round in section, from rim to upper body. Undecorated. Medium hard brownish yellow fabric with medium small white inclusions and a thick light blue core with no discernable inner edge, thin brownish yellow slip with no lustre. One large erupted air bubble evident on interior of body, lines leading from base suggesting possible basket firing technique. Munsell 10YR 6/6.

**P16.9** Drab Polished juglet. Fig. 86. H: 7.9; D: 5.5. Complete. Nipple base, round squat body, tubular neck, round flaring spout. Vertical handle, round in section, from rim with incised decoration of three parallel horizontal lines at the top and four at the bottom. Opposing nipple, incised line around shoulder and set of parallel horizontal incised lines with a line of puncture holes between. Decoration stops on each side before handle and nipple. Interior fabric not visible. Very pale brown slip with slight lustre and slight mottling. Munsell 10YR 7/4.

**P16.10** Drab Polished jug. Fig. 95. H: 20.5; D: 14.2. Broken, repaired, incomplete. Round, slightly pointed base, ovoid body, concave neck with cutaway spout. Vertical handle, oval in section, from rim to upper body, thrust through. Two nipple lugs on either side of neck and small pointed lugs 1cm from lower handle attachment. Hard thick defined blue core, medium amount of medium white inclusions and a medium matt slip. Lines leading from base suggest basket manufacture. Munsell 10YR 8/6.

**P16.11** Drab Polished bowl. Fig. 79. H: 8.8; D: 16.3. Broken, repaired, incomplete. Round base, hemispherical body, incurved, thinning, flat rim. High horizontal loop handle, round in section, from below rim. Opposing rectangular lug from below rim: rounded rectangular section. Medium soft light grey fabric with few medium red and medium amount of medium black inclusions. Burnt out organics evident. Medium red slip with some lustre, worn around handle. Munsell 2.5YR 5/8.

**P16.12** Drab Polished ring base small bowl. Fig. 80. H 9.5; D 13.5 (Remaining). Broken, repaired incomplete. Flanged ring base, hemispherical body, incurved, thinning, round rim. Horizontal lug handle (length 4.6, diameter tapers from 2.2-0.7), round in section with incised lines at 45° from vessel, 10 on each side with a single line at right angle to the vessel at end. Two lugs, one 1.3cm from handle, the other on similar area on opposing side is missing. Relief decoration on body of snake type zigzags, largest 7.5cm long, 2.5cm high, two smaller ones on either side. Medium hard reddish brown fabric with many small and medium white and few medium red inclusions. Thick defined light blue core and a thin worn reddish yellow slip are present. Very uneven base. Munsell fabric: 2.5YR 5/4; slip: 7.5YR 7/6.

**P16.13** Drab Polished juglet. Fig. 87. H: 7.2; D: 6.9. Broken, repaired, incomplete – neck and spout missing. Round base, round body. Vertical handle, round in section. Nipple lug opposing lower handle attachment, otherwise undecorated. Medium hard red fabric with medium small black, few medium white and few large red inclusions. Thick defined dark blue core and a very thin grey mottled matt slip with a pockmarked surface present. Munsell fabric: 2.5YR 5/8; Slip: 5YR 5/1.

**P16.14** Drab Polished juglet. Fig. 88. H: 12.4; D: 8.4. Broken, repaired, incomplete. Round base with slight point, globular body, slightly concave neck, round spout with flaring rim. Vertical handle from midneck to body, round in section. Opposing nipple lug missing but evident, otherwise undecorated. Medium hard reddish yellow fabric with medium small white and few medium red inclusions. Thick defined light blue core with no inner rim. Handle and spout have no core, possibly fired separately. Medium matt reddish yellow slip present. Munsell 7.5YR 7/6.

**P16.15** Drab Polished juglet. Fig. 96. H: 18.0; D: 10.0. Broken, repaired, incomplete. Nipple base, round body, slightly concave neck with cutaway spout. Vertical handle from lower rim to upper body, round in section. Opposing nipple lug, otherwise undecorated. Medium hard red fabric with medium, small white and few medium red inclusions and a thick defined blue core. Thin light brown slip with slight lustre and some mottling. Munsell fabric: 2.5YR 5/6; slip: 7.5YR 6/4.

**P16.16** Drab Polished flask. Fig. 84. H: 16.7; D: 9.7. Complete. Nipple base, globular body; tubular neck with round flaring spout and flaring round rim. Two cotton reel lugs on opposing sides of shoulder/neck join; vertical, rising out of body at 15°. H: 3.2; D: 1.2, flaring at ends to 1.6, round in section. Two nipple lugs between the reel lugs on opposing sides. Incised decoration consisting of circle enclosed dots in pairs, three pairs around neck and three pairs on each side of body at

regular intervals. Incised band around neck/shoulder join comprising two parallel lines with a row of punctured dots in between. Pairs of circles on body separated by vertical bands. Interior fabric not visible, medium reddish yellow slip with slight lustre and slight mottling. Two string holes below rim and basket impressions running from base. Munsell 5YR 6/6.

**P16.17** Drab Polished bowl. Fig. 81. H: 8.4; D: 17.8 (remaining). Broken, repaired, incomplete. Round base, hemispherical body, incurved thinning round rim. High horizontal loop handle, round in section. Undecorated. Hard thick defined blue/grey core with few medium red and medium small white inclusions. Thin brown to brownish yellow mottled slip with slight lustre. Deliberate drill holes at base of vessel on either side, possible repair marks (?). Munsell 10YR 5/3, 10YR 6/6.

**P16.18** Drab Polished small shallow bowl. Fig. 82. H: 6.3; D: 12.3. Broken, repaired, incomplete. Round base, hemispherical body, incurved, thinning, flattened rim. Low vertical loop handle from beneath projecting lug, round in section. Two opposing elongated horizontal lugs projecting 6cm from below rim, rising upwards at 15°. Incised decoration with one line from rim end down centre of lug with four shorter lines at right angles on either side; two circles enclosing central dot then a central band of incised lines with a row of dots between; design mirrored to the end of lug. Identical decoration on both lugs. Incised decoration on vessel body consisting of pairs of circles enclosing dots, one above the other, separated by vertical rows of dots enclosed by parallel lines. White infilling still present in some incisions. Thick defined blue core with medium pink to reddish brown mottled slip with a slight lustre, appears to have been brushed on rather haphazardly on the interior. Munsell 5YR 5/3, 5YR 7/4.

**P16.19** Drab Polished juglet. Fig. 89. H: 8.7; D: 5.6. Broken, repaired, incomplete. Nipple base, slightly ovoid body, slightly concave neck with round mouth and flaring, pointed rim. Handle missing but attachment evident on rim. Incised and impressed decoration consisting of double dash lines below rim. Neck decorated with two crude bands of white infilled lines, one dashed line, then another pair of lines. Several vertical dashed lines in a horizontal row are followed by a dashed line enclosed by two complete lines on the neck shoulder join. Top half of body decorated with pairs of horizontal lines and then a band around the vessel with two rows of puncture marks around it. Medium reddish brown fabric with few medium to large white and few large black inclusions. Thick defined blue core. Thin, very pale brown slip with slight mottling and no lustre. Munsell fabric: 2.5YR 5/3; slip: 10YR 7/4.

**P16.20** Red Polished coarse tripod cooking jar. Fig. 98. H: 182; D: 118. Broken, repaired, incomplete. Round base with three legs, ovoid body, everted, thinning, rounded rim. Handle missing but attachments suggest high vertical from rim. Opposing upturned small horn lug below rim, otherwise undecorated. Coarse medium soft red fabric with few medium black and white inclusions. Thin black diffuse core, unslipped, with black burning marks on upper legs and lower body. Munsell 10R 4/6.

**P16.21 & 21A.** Drab Polished large zoomorphic bowl. Fig. 83. H: 10.4 (remaining); D: 17.0. 2 sherds, broken, repaired, incomplete. Unknown base, probable hemispherical body, straight, thinning round rim. One horizontal square loop handle with pinched corners, square in section. Two zoomorphic lug handles representing stags (?) projecting from rim, one with and one without eyes; round in section. Pointed lugs occur every 3cm around rim. Only 20% of rim remaining, so unknown how many lugs. Medium reddish yellow fabric with medium amount of medium red and few medium black inclusions. Thin defined light blue core. Medium light red slip with slight lustre, worn on interior. Munsell fabric: 7.5YR 7/6; slip: 2.5YR 6/6.

**P16.22** Red Polished small bowl. H: 4.9; D: 10.0. Broken, repaired, incomplete. Round base, hemispherical body, incurved thinning round rim. Horizontal wishbone lug handle rising from below rim with incised lines converging in two sets split by dividing line at end. Opposing projecting lug with decoration as per end of handle. Body undecorated. Medium soft light red fabric with few medium white inclusions and a thin diffuse grey core. Thin red slip with a slight lustre and black mottling around lug. Munsell fabric: 2.5YR 6/6; slip: 2.5YR 5/6.

**P16.23** Drab polished juglet. Fig. 90. H: 9.0; D: 6.2 (remaining). Broken, repaired, incomplete. Base missing, globular body, concave neck with flaring round mouth, no handle. Incised decoration consisting of circles enclosing dots below rim and in vertical rows of three on body, split by vertical bands of incised lines containing rows of dots. Band around lower neck with row of dots in between two incised lines, some remaining white infilling. Medium yellow red fabric with few small black and white inclusions and a thick defined light blue core. Thin yellowish red slip with slight lustre and slight mottling. Munsell 5YR 5/6.

**P16.24** Red Polished Small bowl. H: 6.4; D: 11.7. Broken, repaired, incomplete – three non-joining sherds. Ring base, hemispherical body, thinning, rounded rim. Low vertical handle, round in section, from below elongated lug. Three incised lugs, elongated lug (7cm) above handle has four incised lines across width with four lines lengthways inside these panels with crude rows of punctured dots; split ended. Opposing lug (4cm) has similar decoration with only two cross way sections. Third lug is undecorated. All three are from rim. Draped parallel incised lines from lug to lug contain rows of circular impressions across top of body with evidence of white filling. Medium soft light yellowish brown fabric with few small black and white inclusions. Thin reddish brown slip with a slight lustre. Munsell 10YR 6/4.

**P16.25** Coarse Ware cooking dish. H: 14.2; D: 27.5. Broken, repaired, incomplete. Flat base with three legs, flaring thinning pointed rim. Coarse, medium soft brownish yellow fabric with few small white and few large red inclusions. Thick defined grey core. Thin brown slip on interior with slight lustre and mottling, reddish grey exterior. Punctures on base. Munsell fabric: 10YR 6/6; slip interior: 7.5YR 5/4; exterior: 2.5YR 5/1.

**P26.A & B** Red Polished sherd from composite vessel (juglet) with attaching pedestal. Fig. 97. H: 10.9 (with pedestal) 6.7 (without); D: 4.3. Round body,

tubular neck with cutaway spout. Vertical handle with incised decoration; four bands around the corner of handle and one towards the base; round in section. Concave plinth with round section. Medium hard reddish yellow fabric with few medium black and white inclusions and a light grey core. Thick matt reddish yellow slip. Munsell 7.5YR 6/6. 26B is a Red Polished pedestal attachment. H: 5.0; D: 2.2 top; 1.8 middle; 2.8 base. Concave pedestal attachment for composite vessel, probably P16.26A. Identical fabric and slip.

## **DIAGNOSTICS**

**P16.A** Drab Polished spout from open vessel. H: 25.8; D: 5.6. Tubular necked open spout from near base of vessel, bridge spout, flanged, thinning, round rim. No visible fabric, medium thick diffuse blue core, darker towards outside, with few medium red, medium black and medium small white inclusions. Medium reddish yellow slip with slight/medium lustre on interior and exterior. Very worn towards base of spout, suggesting this was part of the base and rolled to pour. Munsell 7.5YR 6/6.

**P16.B** Red Polished coarse handle and body sherd from tripod cooking jar. H: 10.2 (body), 9.4 (handle); Rim D: 10.0. Everted thinning round rim, high vertical handle, rectangular section, rising straight up from rim to turn at right angle and drop down to middle of body. Coarse medium soft red fabric with few medium black and white inclusions. Thick black diffuse core, unslipped. Identical fabric, form and colour to P16.20. Burnt residue marks on lower body of vessel. Munsell 10R 4/6.

**P16.C** Drab Polished jug spout sherd. H: 12.6; D: 2.2. Slightly concave neck with cutaway spout, thinning, round rim. Vertical handle from lower rim with deep incised decoration of one line running from rim to break in handle, round in section. Pair of parallel diagonal incised lines on either side of neck near handle join. Medium hard thick blue core with medium small white inclusions. Thin brownish slip with a slight lustre and extensive mottling. Munsell 10YR 6/6.

**P16.D** Drab Polished jug spout and handle sherd. H: 11.5; D: 2.8. Slightly concave neck with cutaway spout. Thinning, round rim. Low vertical handle from lower rim, round in section. No oxidised fabric visible, hard thick defined blue/grey core with few large white inclusions and organic impressions. Medium pale brown slip with medium lustre. Munsell 10YR 6/3.

**P16.E** Drab Polished jug spout and handle sherd. H: 9.5; D: 3.1. Slightly concave neck with cutaway spout, thinning, round rim. High vertical handle from lower rim, round in section. Incised decoration on handle; band of dots enclosed by incised line, series of incised horizontal lines on either side of visible top surface with defined space between each side; three vertical incised lines from mouth to handle. No visible oxidised fabric, medium blue core with medium small white, few large red and few large white inclusions. Thin grey slip with slight lustre and slight mottling. Munsell 10YR 4/1.

**P16.F** Drab Polished sherd from closed vessel. Fig. 99. H: 9.4; D: 9.5. Sherd with lug and impressed decoration. Circular lug with incised cross with one punctured circle in each quarter. Three impressed circles around possible attachment (missing). Hard Red fabric with few small and large white inclusions. Thick defined light blue core and a thin worn pinkish grey slip. Munsell 7.5YR 6/2.

**P16.G** Black Topped Red Polished lug sherd. H: 5.2; D: 5.0. Pierced vertical lug. Soft pale red fabric with few small white, few medium red inclusions and burnt out organics. Thin red slip with a high lustre, black interior with high lustre. Probably same vessel as 16.H and 16.I. Munsell fabric: 2.5YR 7/2; slip: 2.5YR 4/6.

**P16.H** Black Topped Red Polished rim sherd. H: 3.8; D:16.0 (vessel). Incurving, constant, round rim. 14 sherds from same vessel but heavily eroded edges make reconstruction impossible. Probable bowl. Soft pale red fabric with few small white, few medium red inclusions and burnt out organics and small gold mica?? Thin red slip with a high lustre, black interior with high lustre extending over rim and c.1.5cm onto exterior. Probably same vessel as 16.G. Munsell fabric: 2.5YR 7/2; slip: 2.5YR 4/6.

**P16.I** Four Red Polished incised sherds from juglet. Linked concentric circle pattern, white infilling. One spout sherd; tubular neck with round spout and flaring, thinning, flattened rim and five parallel incised horizontal lines halfway down neck. Soft red fabric with few small black inclusions. Thin red slip, heavily abraded with a medium lustre. Munsell 2.5YR 4/8.

**P16.J** Drab Polished zoomorphic lug. H: 6.3; D: 5.1. Representation of neck, head and possible horns of unknown animal. Impressed circles with central dots as eyes, incised horizontal lines on either side of neck. Deep incised mouth. Hard thick blue core. Thin reddish yellow slip with no discernable lustre. Munsell 7.5YR 7/6.

**P16.K** Red Polished lug. H: 5.5; D: 2.3-1.1. Straight lug with flaring flattened end. Right angled projection from mid section; both have round sections. Circle impressions with central dot appear all over lug. End has incised dividing line with two of the circle impressions on either side. Medium hard yellowish red fabric with few small white inclusions and a thick defined dark grey core. Thin yellowish red slip with medium lustre. Not as well finished as Drab Polished example. Munsell 5YR 5/8.



#### **TOMB 4**

**P4.1.** Black polished flask. H: 19.1; D: 10.4. Broken, repaired, incomplete. Slightly upward tapering neck, round body, flaring rim. Two pierced holes just below rim, deeply incised decorations of four horizontal bands, blocks of eight diagonal lines forming a diamond shape on the lower body and lower neck and rectangular boxes containing a impressed dots forming a cross shape on the upper body and upper neck, all filled with white material. Medium hard light brownish gray fabric with few small white inclusions and a worn but thick black slip with slight lustre. Munsell 2.5Y 6/2, 2.5Y 2.5/1.

**P4.2.** Black polished jug. H: 12.3; D: 7.7. Broken, repaired, incomplete – neck and top of body remaining. Concave neck with round backward sloping mouth and flaring rim. Handle missing but attachment shown just below rim and on upper body with an oval section. Broken lug attachment just below rim opposing side to handle and deeply incised decoration of complex horizontal, vertical and diagonal lines and dots, filled with white material. Medium/hard dark gray fabric with few small white inclusions and presence of a worn but thick black slip with some lustre. Munsell 2.5Y 4/1, 2.5Y 2.5/1.

**P4.3.** Black polished base sherd from closed vessel. D: 10.3. Th: 1.0 Round flattish base with slight indentation, decorated with some heavily incised dots and lines on the lower body and filled with white material. Hard dark gray fabric with few small white inclusions and a medium black slip with a high lustre. Munsell 2.5Y 4/1, 2.5Y 2.5/1

## Appendix 1: Maps



Figure 11: Satellite image of Cyprus (adapted from Google Earth 2006: Europa Technologies).

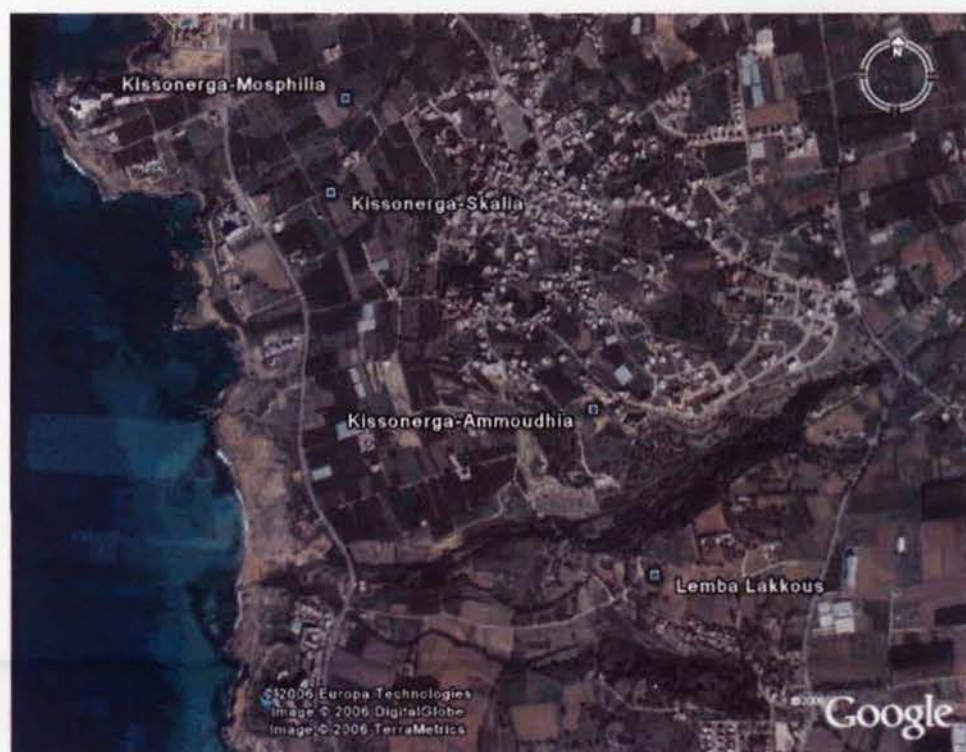


Figure 12: Satellite image of the Kissonerga area showing exact locations of sites mentioned in the text (adapted from Google Earth 2006: Europa Technologies).

## Appendix Two: Glossary of Abbreviations used in the Text

- Pottery Styles:     DPW – Drab Polished Ware  
                            DPBC – Drab Polished Blue Core  
                            RPW – Red Polished Ware  
                            WPW – White Painted Ware  
                            BPW – Black Polished Ware
- Chronology:        EC – Early Cypriot Bronze Age  
                            MC – Middle Cypriot Bronze Age  
                            LC – Late Cypriot Bronze Age
- Miscellaneous:    CAARI – Cyprus American Archaeological Research  
                            Institute  
                            RDAC – Report of the Department of Antiquities of  
                            Cyprus

### Appendix 3: Pottery Recording – Recording Sheet

|                         |               |                |             |                 |                  |
|-------------------------|---------------|----------------|-------------|-----------------|------------------|
| <b>Site</b>             | <b>Tomb</b>   |                | <b>Date</b> |                 |                  |
| <b>VESSEL/SHERD NO.</b> |               |                |             |                 |                  |
| <b>FORM/FABRIC</b>      |               |                |             |                 |                  |
| <b>COLOUR IN</b>        |               |                |             |                 |                  |
| <b>COLOUR SLIP</b>      |               |                |             |                 |                  |
| <b>HEIGHT mm</b>        |               |                |             |                 |                  |
| <b>DIAMETER mm</b>      |               |                |             |                 |                  |
| <b>CORE?</b>            |               |                |             |                 |                  |
| <b>C/S WIDTH mm</b>     |               |                |             |                 |                  |
| <b>SPOUT/MOUTH</b>      | Open          | Tubular        | Bridge      | Cutaway         |                  |
| <b>RIM</b>              | <u>Course</u> | <u>Profile</u> | <u>End</u>  | <u>Diameter</u> | <u>Thickness</u> |
| <b>NECK TYPE</b>        |               |                |             |                 |                  |
| <b>HANDLE TYPE</b>      |               |                |             |                 |                  |
| <b>HANDLE SECTION</b>   | Round         | Oval           | Square      | Rectangular     | Other(detail)    |
| <b>BASE</b>             |               |                |             |                 |                  |
| <b>LUGS</b>             |               |                |             |                 |                  |
| <b>DECORATION STYLE</b> | Relief        | Incised        | Impressed   |                 |                  |
| <b>% INTACT</b>         |               |                |             |                 |                  |
| <b>INCLUSIONS</b>       |               |                |             |                 |                  |
| <b>Quantity</b>         | None          | Few            | Medium      | Many            |                  |
| <b>Size</b>             | Small         | Medium         | Large       |                 |                  |
| <b>Colour</b>           | Black         | Red            | White       |                 |                  |
| <b>HARDNESS</b>         |               |                |             |                 |                  |
| <b>SLIP</b>             | Presence      | Lustre         | Mottling    |                 |                  |
| <b>TEXTURE</b>          |               |                |             |                 |                  |
| <b>PHOTO NO.</b>        |               |                |             |                 |                  |
| <b>DRAWING NO.</b>      |               |                |             |                 |                  |

Pottery recording sheet (adapted from Frankel and Webb, 1996).

## Pottery Recording Criteria

**Sherds:** Basic sherd shape. Open, bowls, dishes, pans etc. Closed, jugs, juglets, cooking pot

**Ware:** Basic definition of wares as taken from other sources. (Herscher, Frankel and Webb, Astrom)

### Diagnostic Pottery

*Shape:*

- 1 General: small closed, large closed, small open, large open, other.
- 2 Specific: jug, juglet, bottle, flask, cooking pot, small bowl, large bowl, spouted bowl, amphora.

*Mouth type:*

- 3 Round: mouth in a complete circle
- 4 Cutaway: mouth shaped to form sloping cut-away or beaked spout
- 5 Pinched: mouth pinched to form pouring lip
- 6 Lateral: vertical mouth at base of tubular spout

*Mouth angle:* (Round or pinched vessels only)

- 7 Horizontal
- 8 Forward sloping: mouth slopes downwards from handle
- 9 Backward sloping: mouth slopes downwards towards handle

*Rim Course:* (Rim sherds only)

- 10 Straight: no directional change
- 11 Flaring: curving outwards
- 12 Everted: sharply angled outwards (identifiable corner point)
- 13 Incurved: curving inward
- 14 T-shaped: widening outward and inward
- 15 Pendent: outward and downward

*Rim Profile:* Changes in vessel wall as it approaches rim

- 16 Constant: no change
- 17 Thinning: gets narrower
- 18 Thickening: gets thicker
- 19 Swelling: gets thicker then thinner

*Rim End:*

- 20 Rounded: a rounded end
- 21 Flattened: a flattened end
- 22 Pointed: brought to a finer point
- 23 Indented: indentation into edge

*Lug:* (other than lug handle)

- 24 Number
- 25 Size
- 26 Pierced
- 27 decorated

*Spout Type:*

- 28 Open: open at rim
- 29 Tubular: tubular spout from vessel body
- 30 Bridge: open from below continuous rim, which forms bridge over spout base

*Neck Type:*

- 31 Cylindrical: no change in thickness
- 32 Upwards taper: gets narrower towards top
- 33 Widening: gets wider towards top
- 34 Concave: narrows then widens again
- 35 Convex: bulges in middle

*Dimensions:* (To nearest 0.1mm)

- 36 Rim D general: general rim diameter
- 37 Rim D Specific
- 38 DepthMaxD: vertical distance from rim or neck base to widest part of body
- 39 HtMaxD: vertical distance from base to widest part of body
- 40 RimW: width of T-shaped rim
- 41 TotalH: total height of complete vessel
- 42 BodyHt: height of body of restricted vessel
- 43 BodyD: external maximum body diameter
- 44 BaseD: diameter across (flat) base
- 45 NeckHt: from neck base/shoulder to top of rim
- 46 NeckD: external diameter of neck (top, middle and bottom)
- 47 HandleD: two measurements across handle (same if round or square)
- 48 WallTh: Thickness of vessel wall at 4 possible points
- 49 RimTH: measured 2-3mm from end or rim
- 50 BelowRimTH: 5-6mm below rim
- 51 BodyTH: thickness measured at maximum and minimum points of body
- 52 BaseTH: measured at centre of vessel base

*Slip:* (Presence and type)

- 53 None: never any slip on vessel
- 54 Worn: slip present but too poorly preserved
- 55 Thin: thin slip
- 56 Medium: medium thickness and quality
- 57 Thick: thick slip

*Slip Lustre:*

- 58 Unslipped
- 59 Too worn to tell
- 60 Matt: no trace of shine

- 61 Slight
- 62 Medium
- 63 high

*Mottling:*

- 64 None: no patches at all
  - 65 Slight: discolouration noticeably defined
  - 66 Distinct: clear, well defined patches
- Slip Colour:* (Munsell code where original colour observable)
- 67 Exterior
  - 68 Interior (where present)

*Texture:*

- 69 Very fine
- 70 Fine
- 71 Medium
- 72 Coarse
- 73 Very coarse

*Hardness:* (Semi-subjective on lines of Mohs scale)

- 74 Very soft: scratched easily by fingernail
- 75 Soft: scratched easily by knife
- 76 Medium-soft: scratched with knife
- 77 Medium-hard: requires some force to scratch with knife
- 78 Hard: hard to scratch with knife
- 79 Very hard: very hard to scratch with knife

*Core:* (Presence of dark core)

- 80 None
- 81 Thin
- 82 Thick

*Core Colour:*

- 83 Light
- 84 Dark

*Core Shape:*

- 85 Sharply defined
- 86 diffuse

*Fabric Colour:* Munsell colour of clear section

*Quantity of Inclusions:*

- 87 None
- 88 Few
- 89 Medium
- 90 Many

*Size of Inclusions:*

- 91 Small
- 92 Medium
- 93 Large

*Colour of Inclusions:* (as visible at 10x10 using magnification)

- 94 Black
- 95 Red
- 96 White

*Base Type:*

- 97 Round: general rounded base
- 98 Flat: bottom flattened
- 99 Pointed: a fairly sharp point
- 100 Knob: a small knob or nipple
- 101 Ring: a circular ring base
- 102 Foot: usually tripod feet
- 103 Flanged: base projects outward beyond wall

*Handle Location:* (Point of upper attachment)

- 104 From rim: top of rim
- 105 Below rim: from immediately below rim
- 106 Mid neck: from middle of neck
- 107 Lower neck: from low on neck or shoulder junction

*Handle Type:*

- 108 Horizontal: horizontal loop or wishbone
- 109 Vertical: vertical, uncertain type
- 110 High vertical: rises from upper joint
- 111 Low vertical: falls from upper joint
- 112 Small loop: vertical

*Handle Section:*

- 113 Round
- 114 Oval
- 115 Square
- 116 Rectangular

*Decoration, technique:*

- 117 Relief: raised or applied relief decoration
- 118 Incised: incised decoration
- 119 Impressed: punctures or other impressions
- 120 Description of motifs
- 121

*Evidence of Manufacture.*



Tomb 5 Vessels 1-3

Scale 1:4

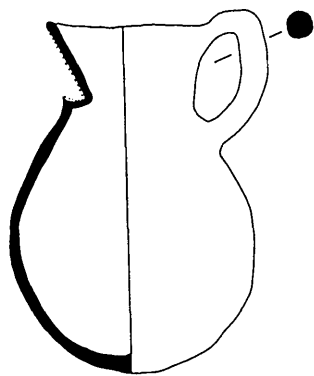


Figure 53: P5.1

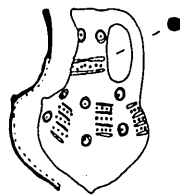


Figure 14: P5.2

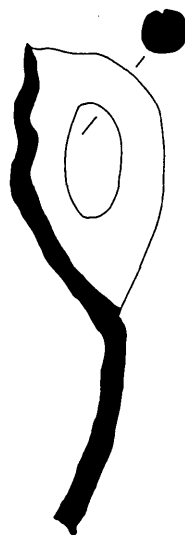
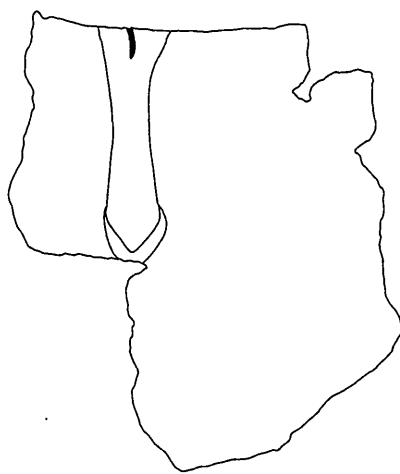
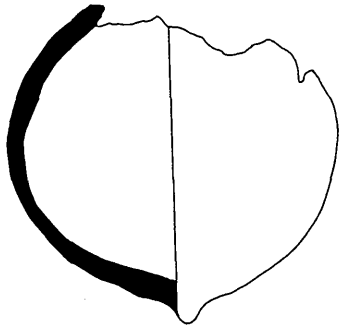


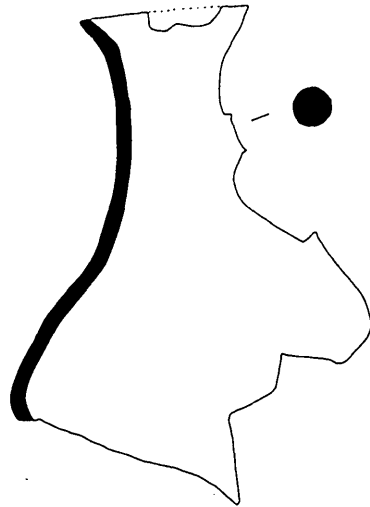
Figure 15: P5.3



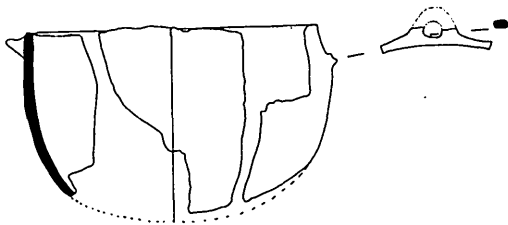
**Tomb 5: Vessels 4-8**  
**Scale 1:4**



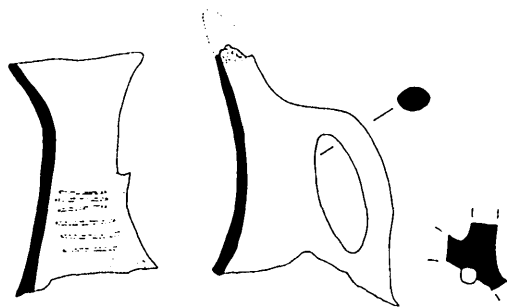
**Figure 16: P5.4**



**Figure 17: P5.5**



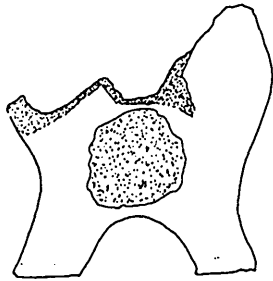
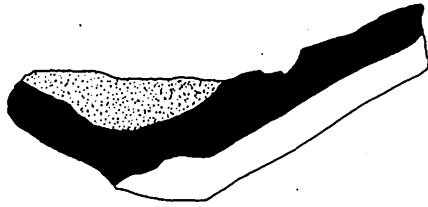
**Figure 18: P5.6**



**Figure 19: P5.7**

**Figure 20: P5.8**

Tomb 5 Sherds A-C  
Scale 1-2



Figures 21-23: P5.A, P5.B, P5.C

Tomb 10 Small bowls  
Scale 1:2

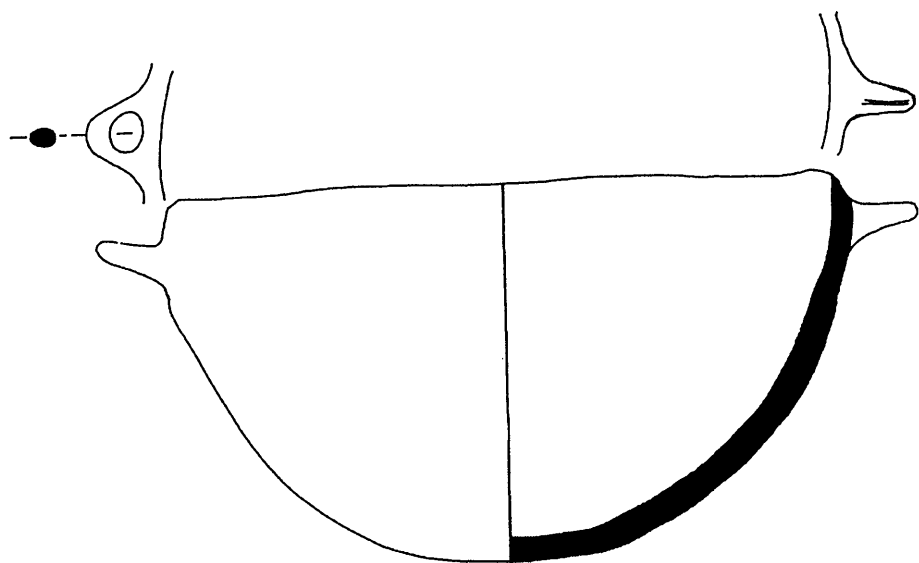


Figure 24: P10.1

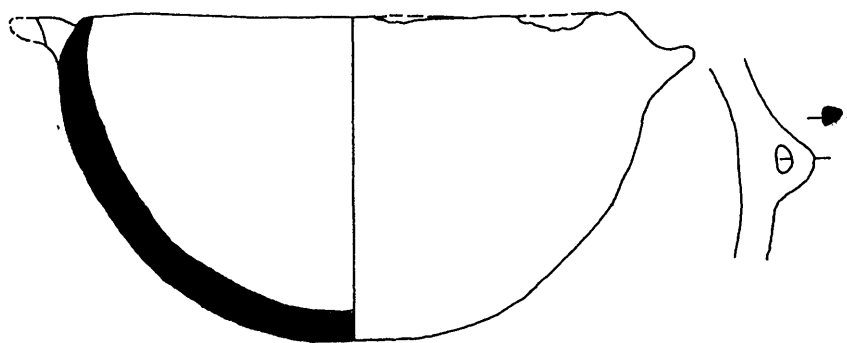


Figure 25: P10.2

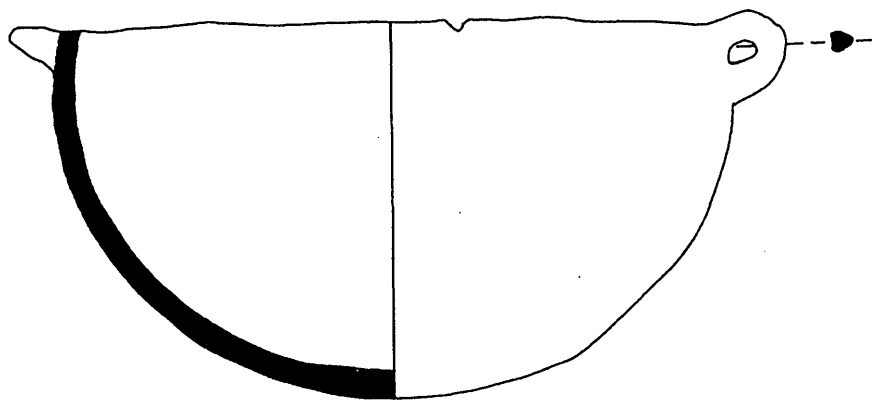
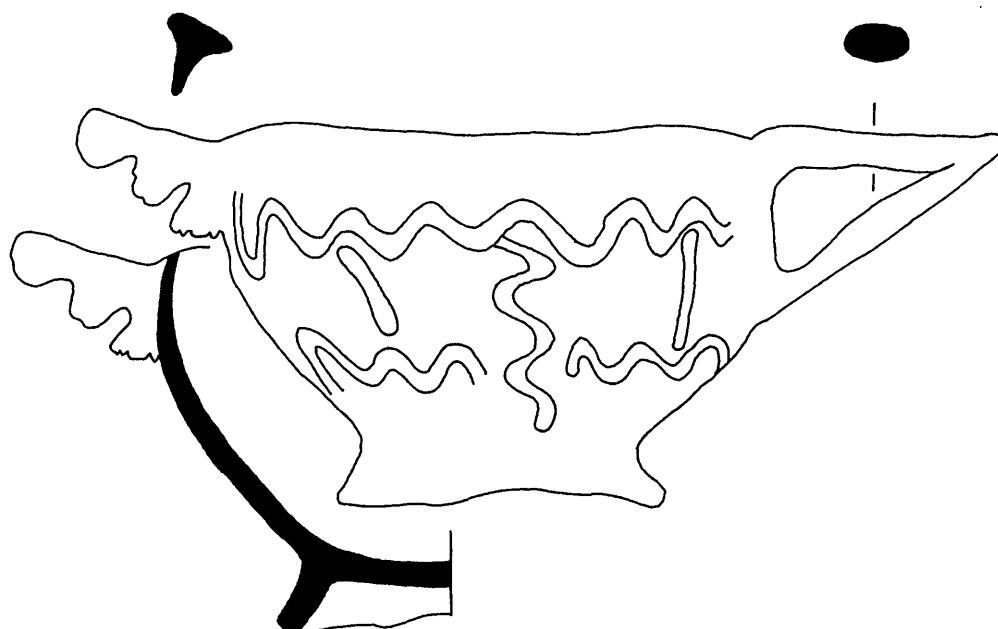
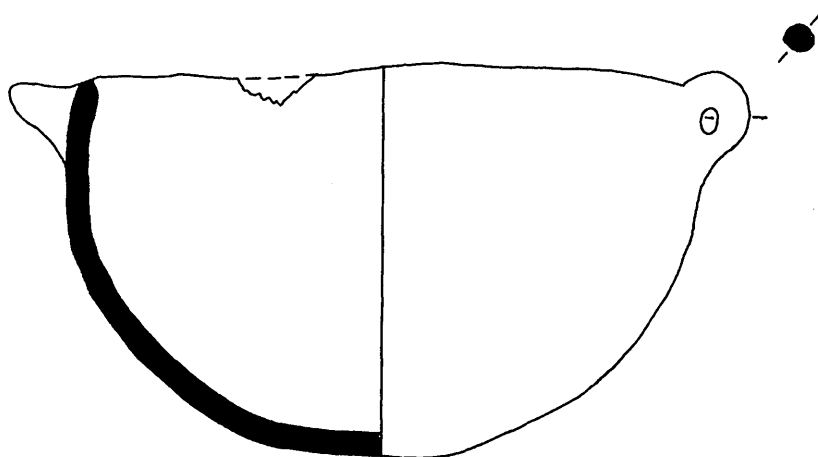


Figure 26: P10.3

**Tomb 10 Small Bowls**  
**Scale 1:2**



**Figure 27: P10.4**



**Figure 28: P10.5**

## Tomb 10 Bowls

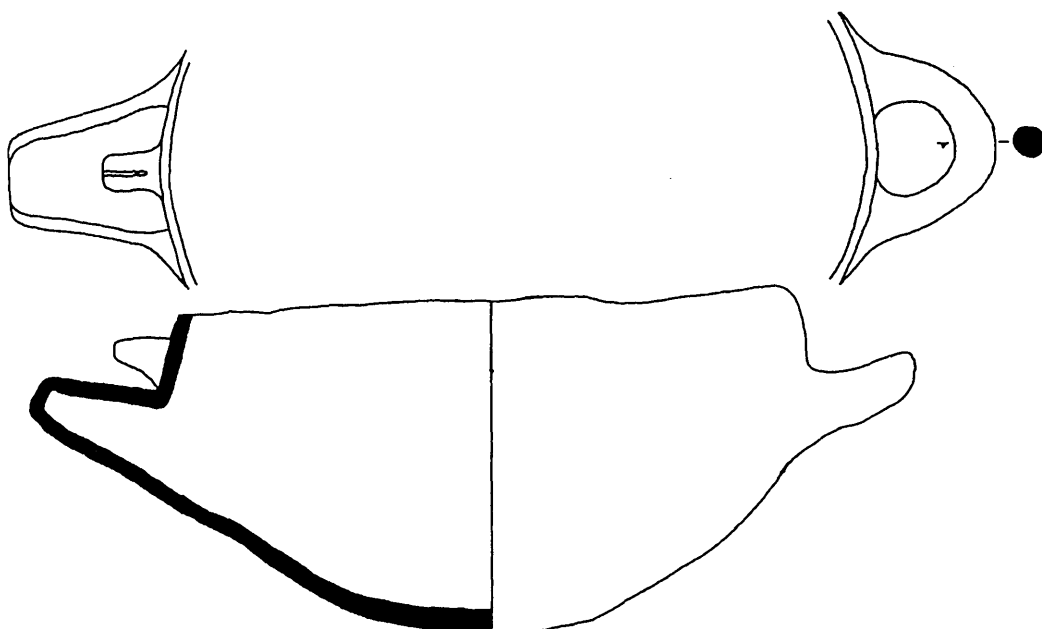


Figure 29: P10.7 (Scale 1:4)



Figure 30: P10.10 (Scale 1-2)

Tomb 10 Large Jugs  
Scale 1-4

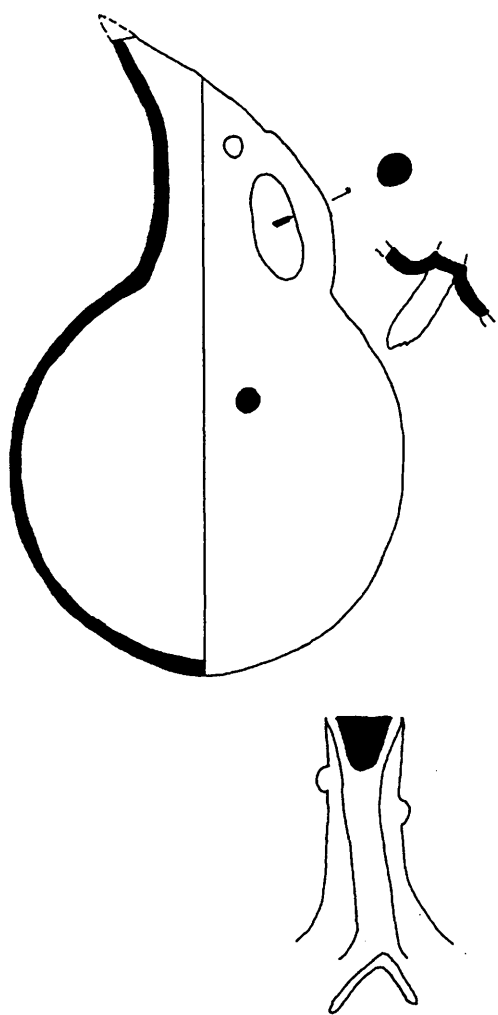


Figure 31: P10.6

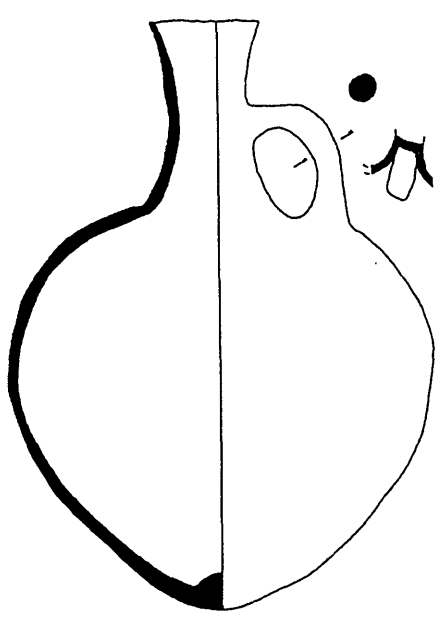
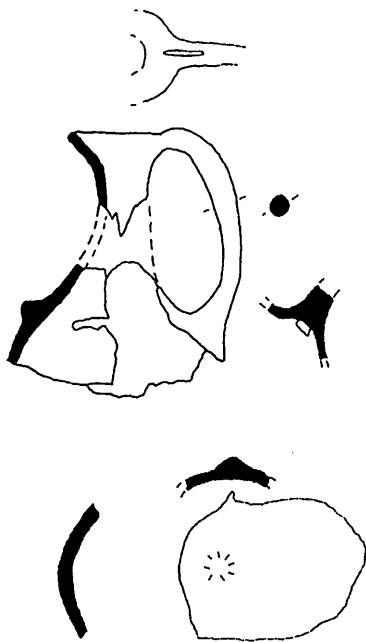
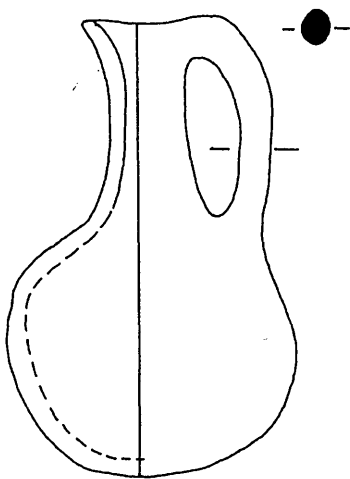


Figure 32: P10.8

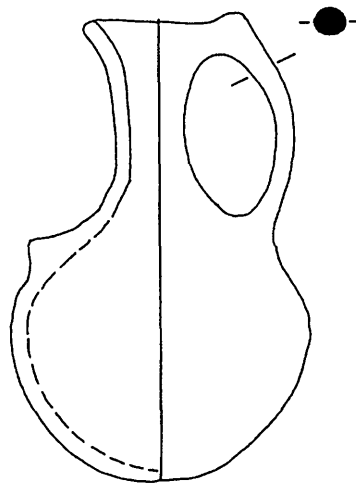
**Tomb 10 Round Spouted Juglets**  
**Scale 1:2**



**Figure 33: P10.9**



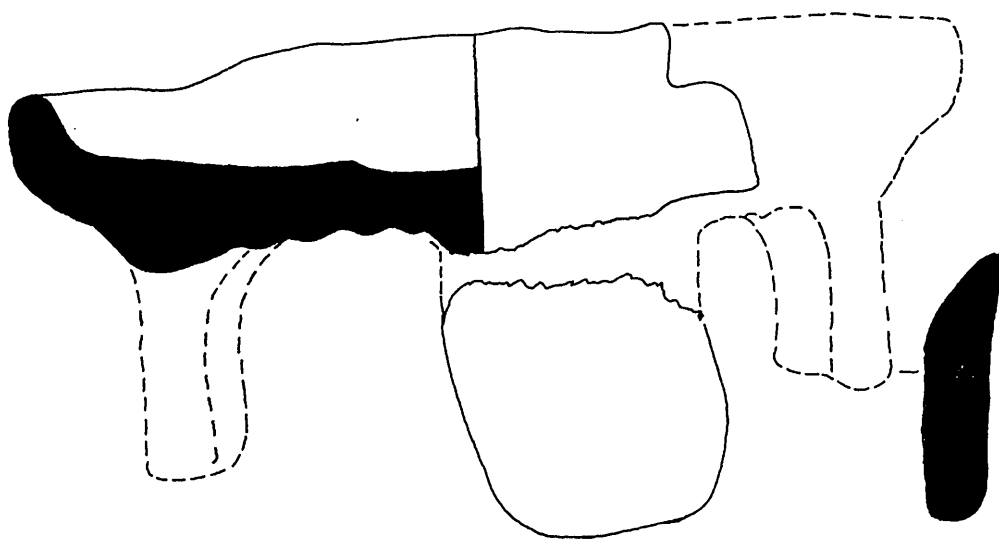
**Figure 34: P10.11**



**Figure 35: P10.12**

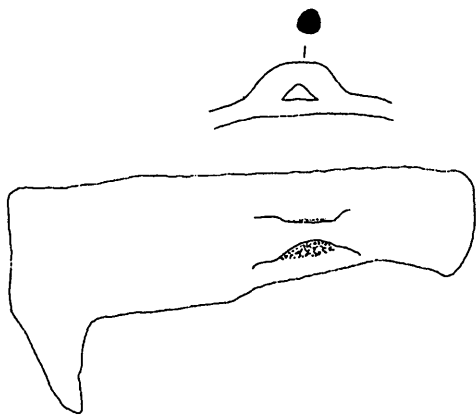


**Tomb 10 Coarse Ware**  
**Scale 1:2**

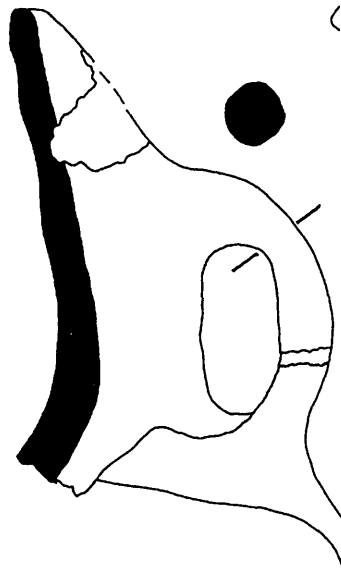


**Figure 36: T10.13**

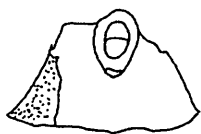
**Tomb 10 Sherds A-E**  
**Scale 1:2**



**Figure 37: P10.A**



**Figure 38: P10.B**



**Figure 39 P10.C**



**Figure 40: P10.D**

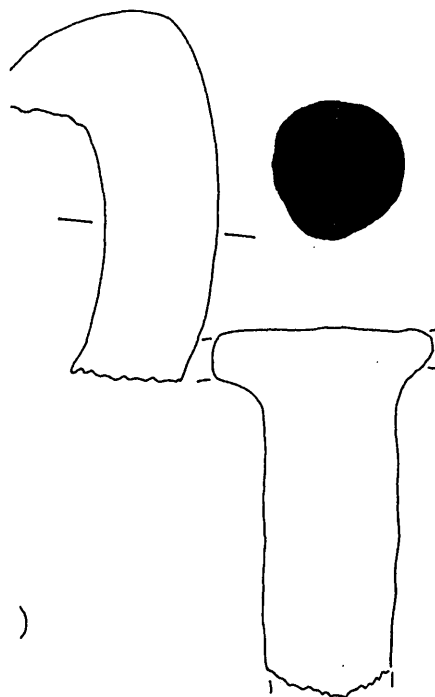


**Figure 41: P10.E**

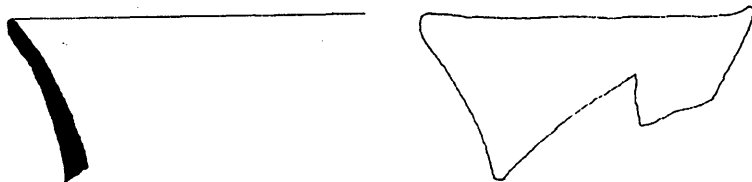
**Tomb 10 Sherds F-H**  
**Scale 1:2**



**Figure 6: P10.F**

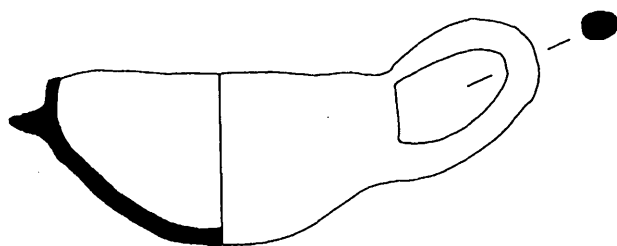


**Figure 43: P10.G**

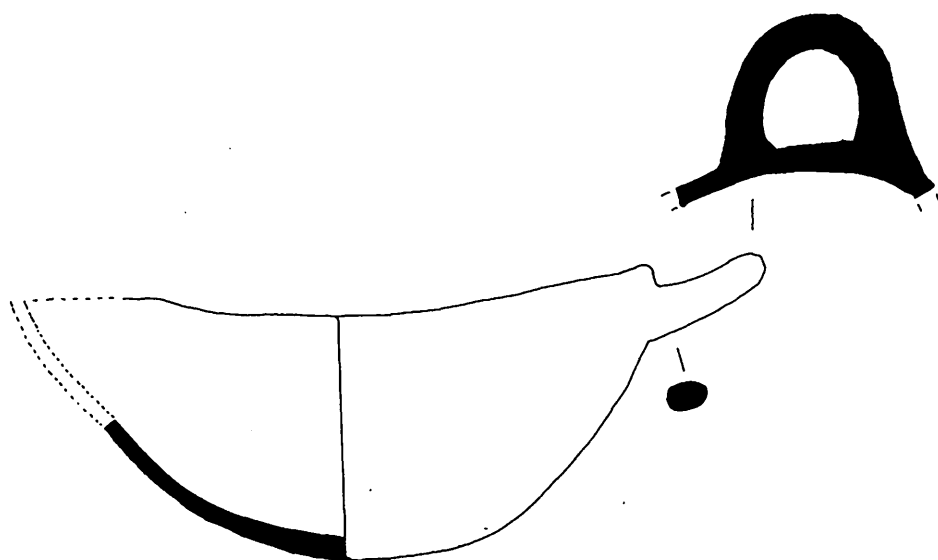


**Figure 44: P10.H**

**Tomb 15 Small Bowls**  
**Scale 1:2**

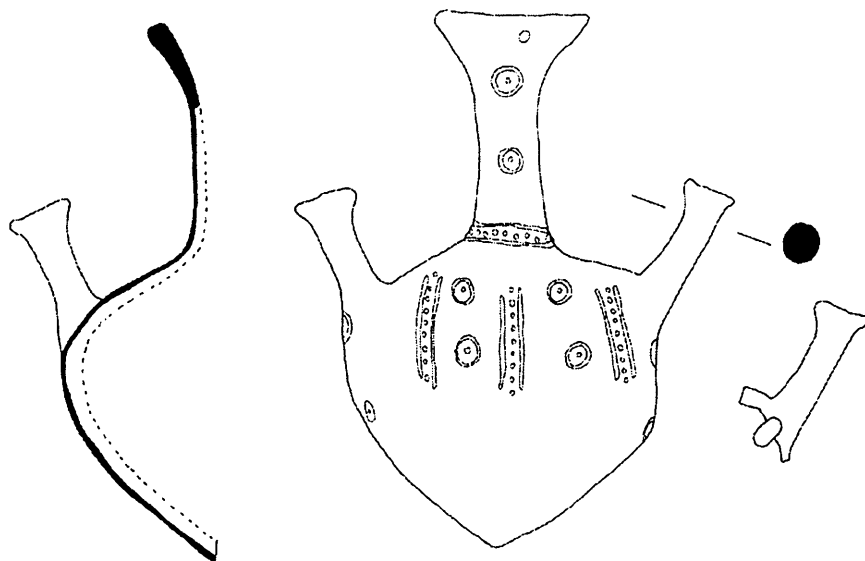


**Figure 45: P15.14**

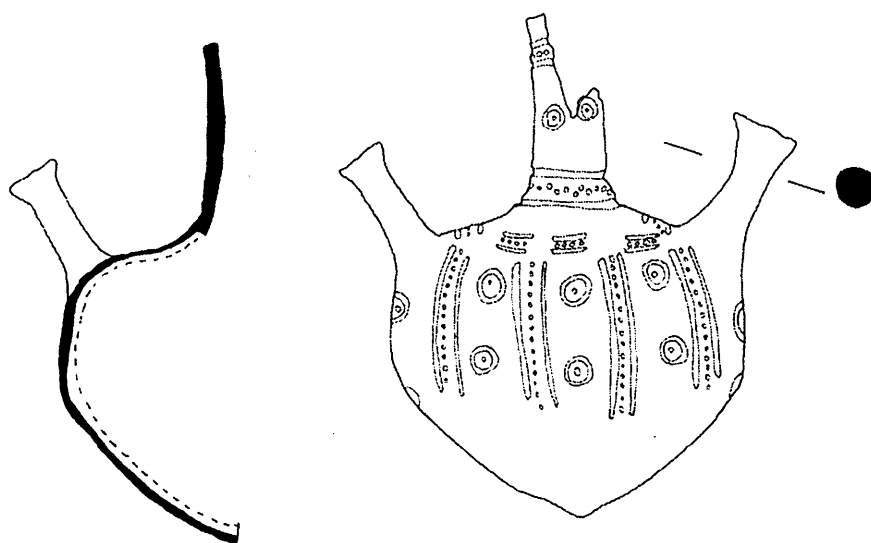


**Figure 46: P15.16**

**Tomb 15 Flasks**  
**Scale 1:2**



**Figure 47: P15.1**



**Figure 48: P15.10**

**Tomb 15 Round Spouted Juglets**  
**Scale 1:2**

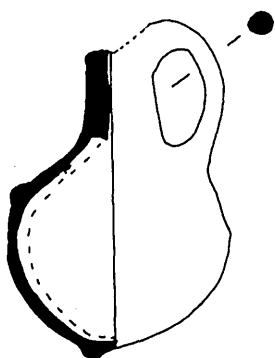


Figure 49: P15.3

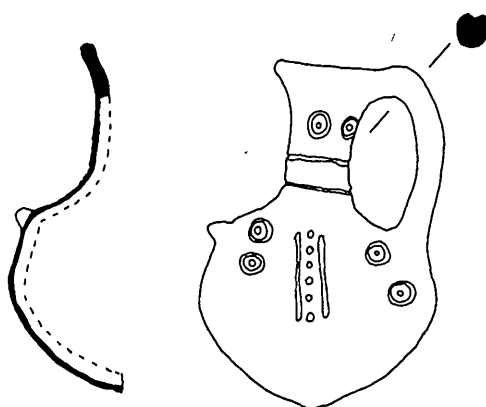


Figure 50: P15.4

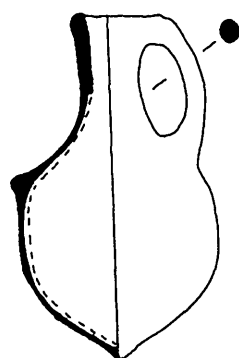


Figure 51: P15.5

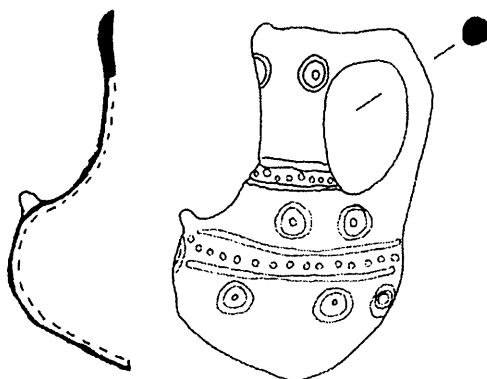


Figure 52: P15.6

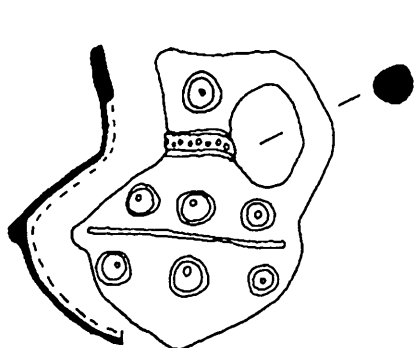


Figure 53: P15.7

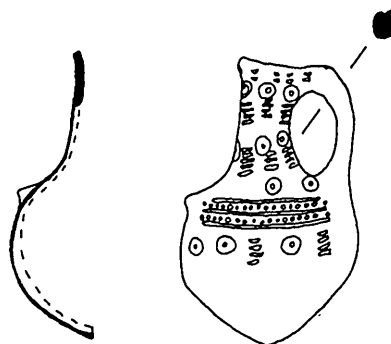
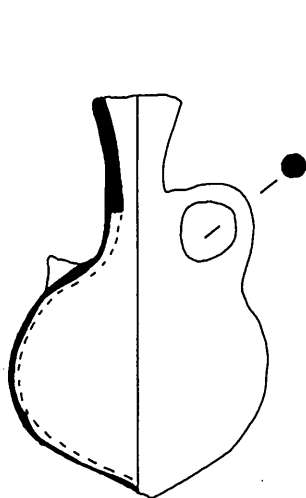
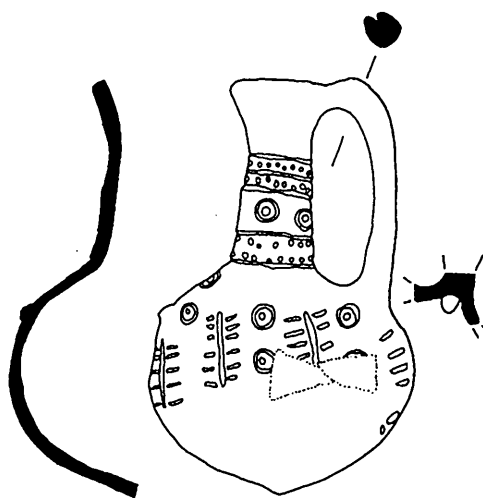


Figure 54: P15.8

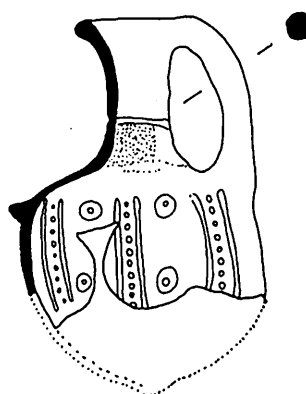
**Tomb 15 Round Spouted Juglets**  
**Scale 1:2**



**Figure 55: P15.9**

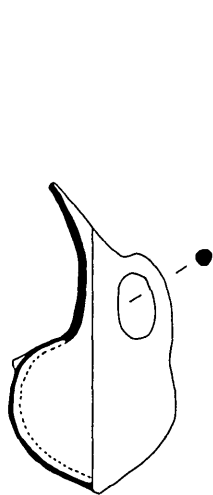


**Figure 56: P15.13**

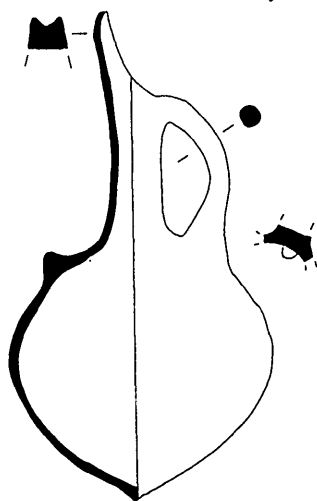


**Figure 57: P15.21**

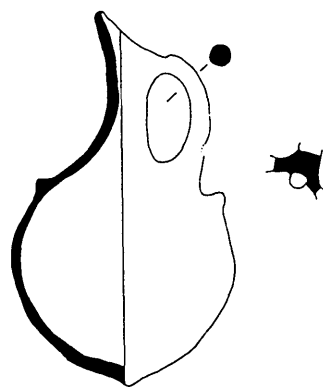
**Tomb 15 Cutaway Spouted Jugs**  
**Scale 1:4**



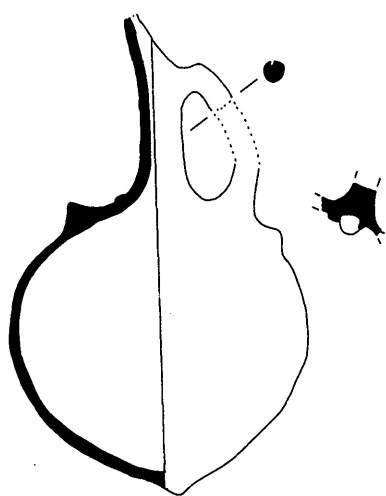
**Figure 58: P15.2**



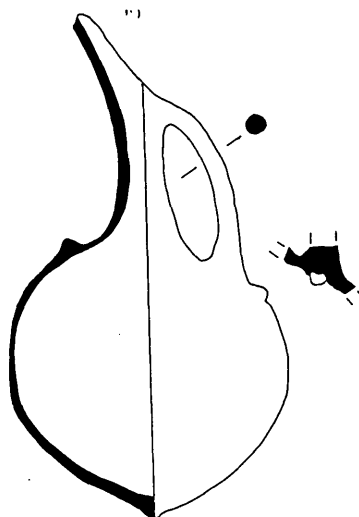
**Figure 59: P15.11**



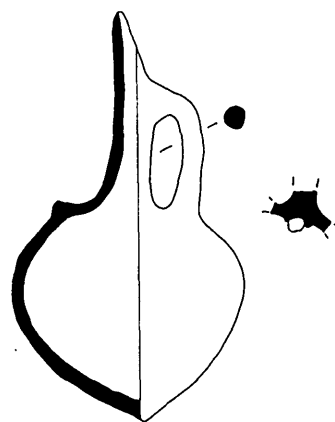
**Figure 60: P15.15**



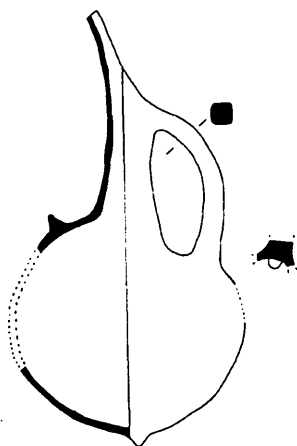
**Figure 61: P15.17**



**Figure 62: P15.18**



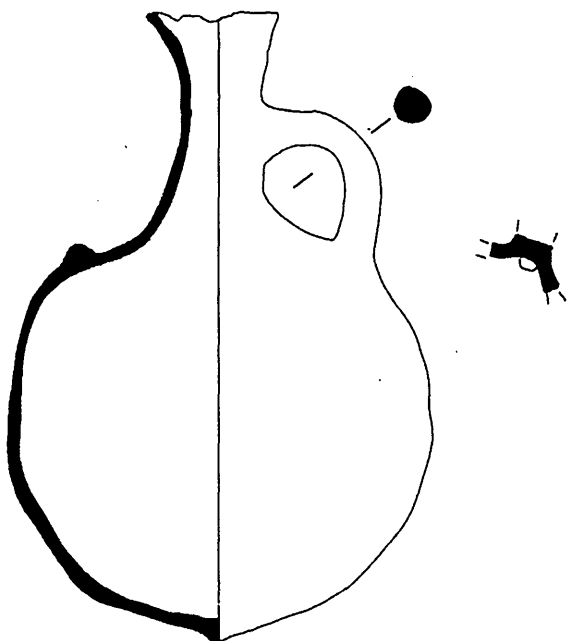
**Figure 63: P15.19**



**Figure 64: P15.20**



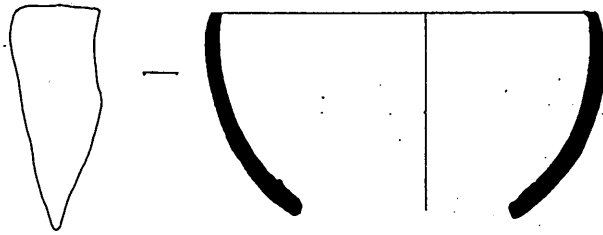
**Tomb 15 Large Jugs**  
**Scale 1:4**



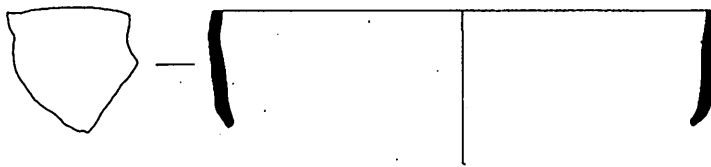
**Figure 65: P15.12**

**Tomb 15 Sherds A-F**

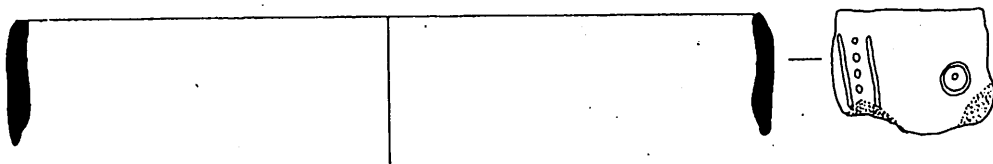
**Scale 1:2**



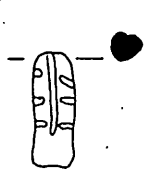
**Figure 66: 15.A**



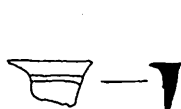
**Figure 67: 15.B**



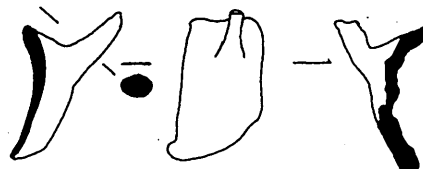
**Figure 68: 15.C**



**Figure 69: 15.D**

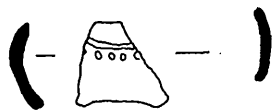


**Figure 70: 15.E**

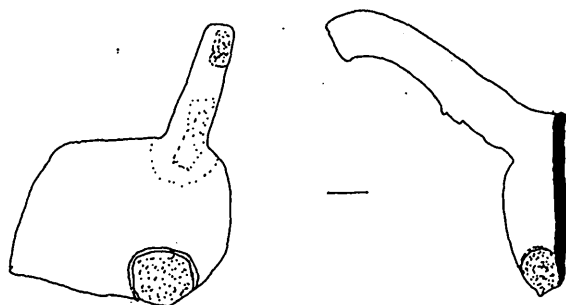


**Figure 71: 15.F**

**Tomb 15 Sherds: G-J**  
**Scale 1:2**



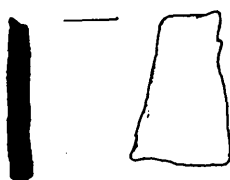
**Figure 72: 15.G**



**Figure 73: 15.H**

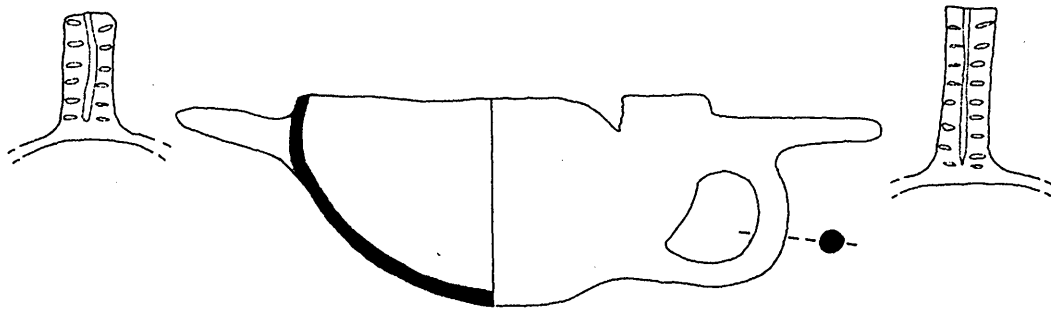


**Figure 74: 15.I**

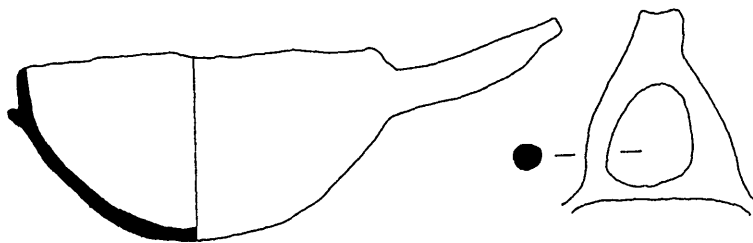


**Figure 75: 15.J**

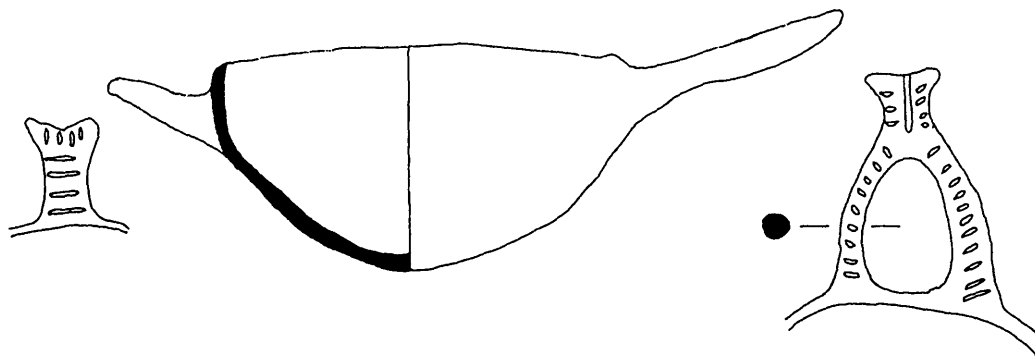
**Tomb 16: Small Bowls**  
**Scale 1:2**



**Figure 76: P16.1**

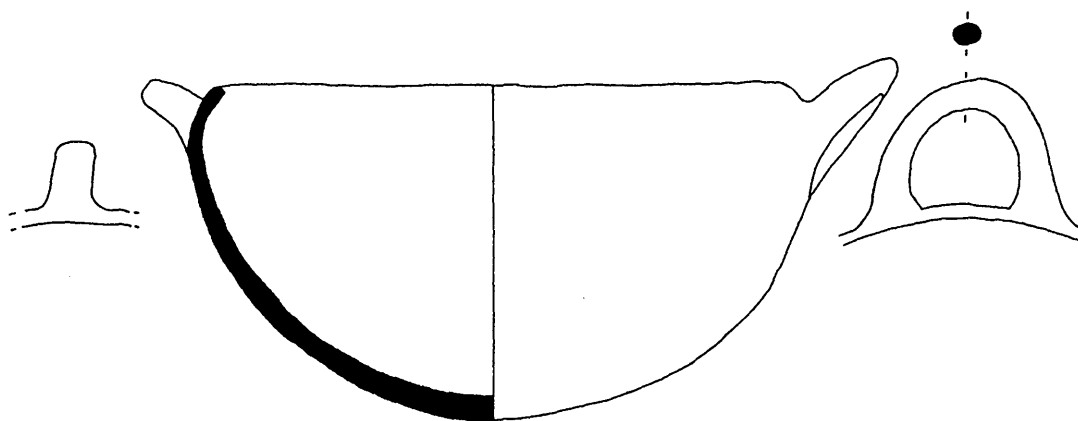


**Figure 77: P16.4**

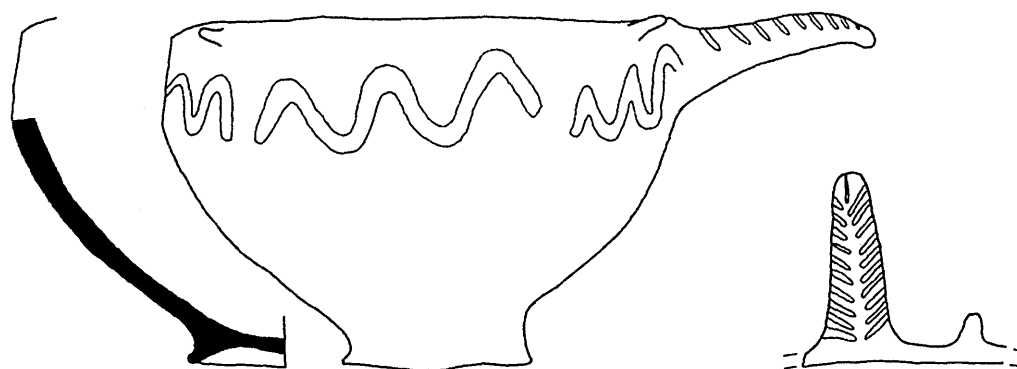


**Figure 78: P16.5**

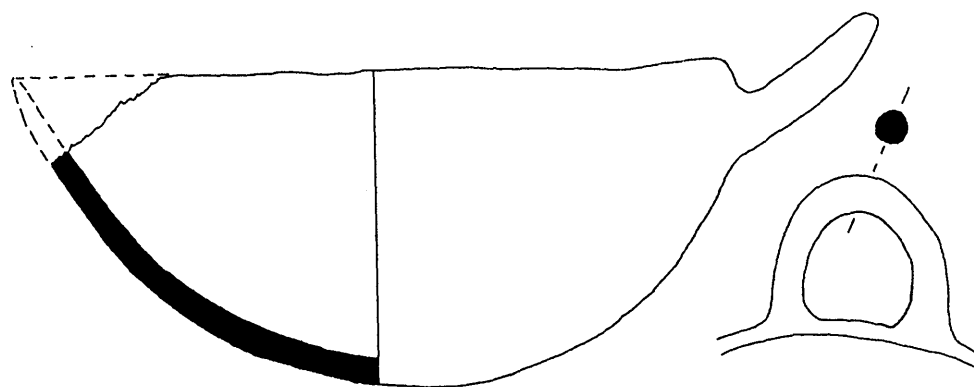
**Tomb 16: Small Bowls**  
**Scale 1:2**



**Figure 79:P16.11**

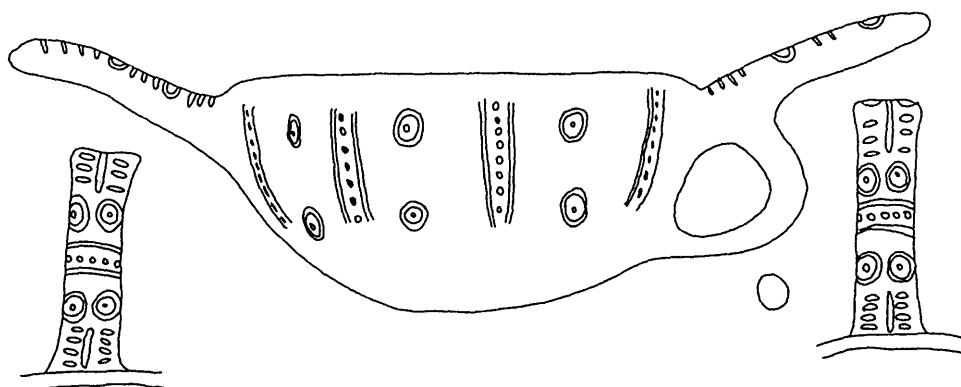


**Figure 80: P16.12**

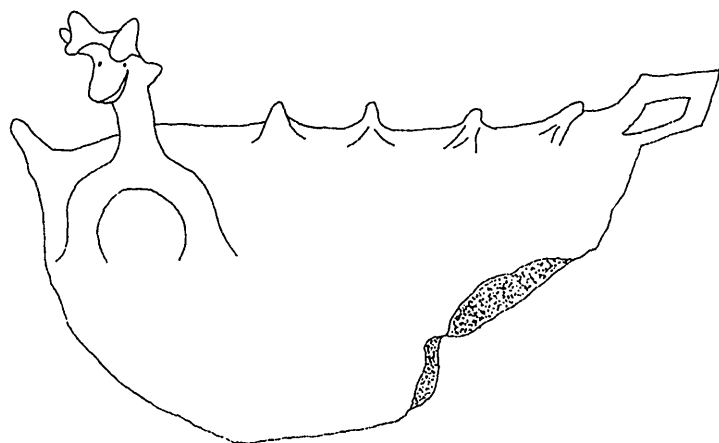


**Figure 81: P16.17**

**Tomb 16: Small Bowls**  
**Scale 1:2**



**Figure 82: P16.18**



**Figure 83: P16.21**

**Tomb 16 Flask/Round Spouted Juglets**  
**Scale 1:2**

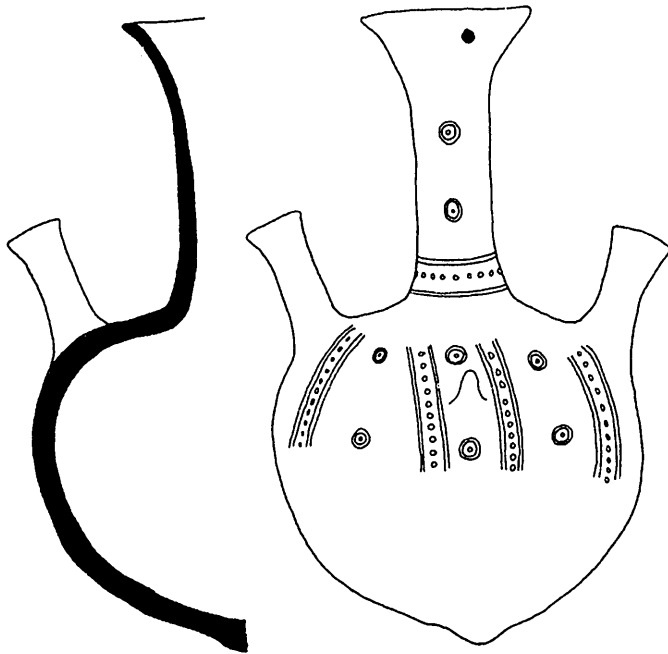


Figure 84: P16.16

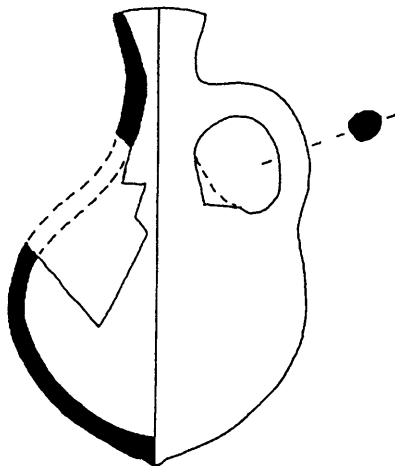


Figure 85: P16.2

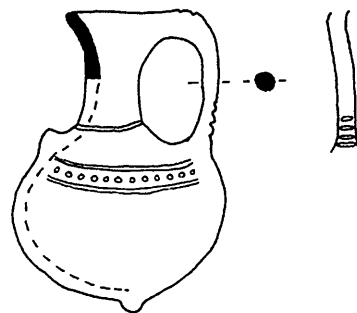
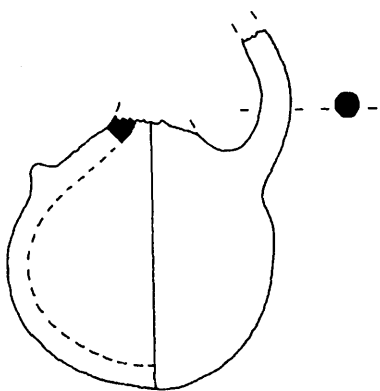
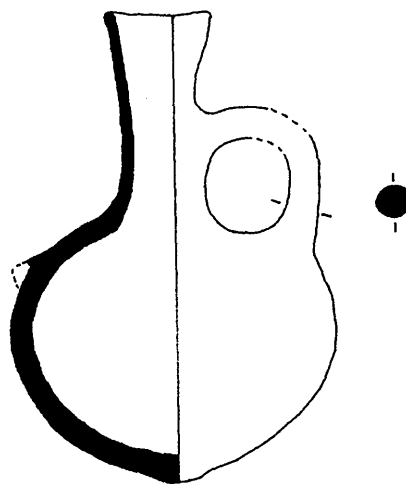


Figure 86: P16.9

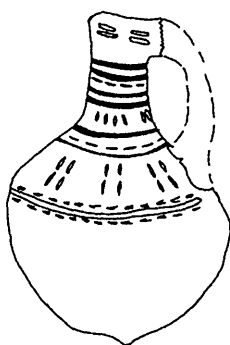
**Tomb 16: Round Spouted Juglets**  
**Scale 1:2**



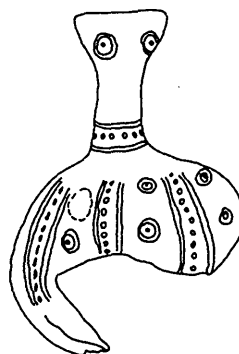
**Figure 87: P16.13**



**Figure 88: P16.14**



**Figure 89: P16.19**



**Figure 90: P16.23**



## Tomb 16: Cutaway Spouted Jugs

Scale 1:2

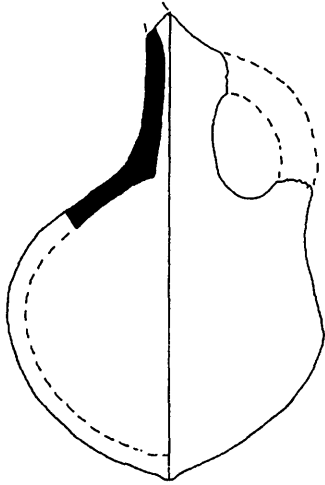


Figure 91: P16.3

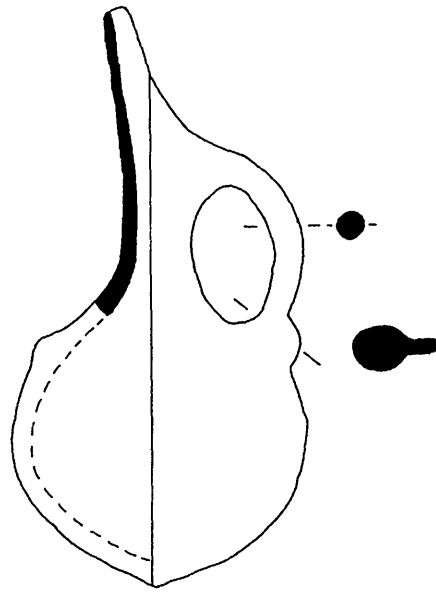


Figure 92: P16.6

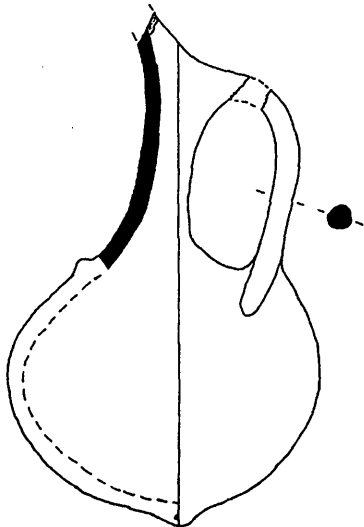


Figure 93: P16.7

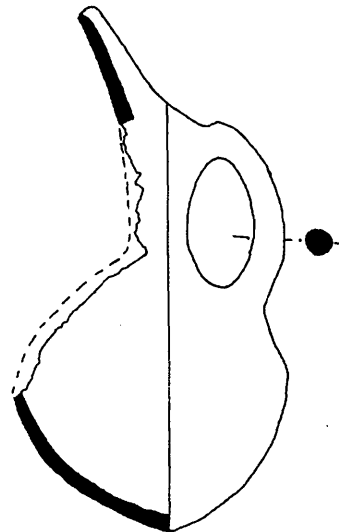
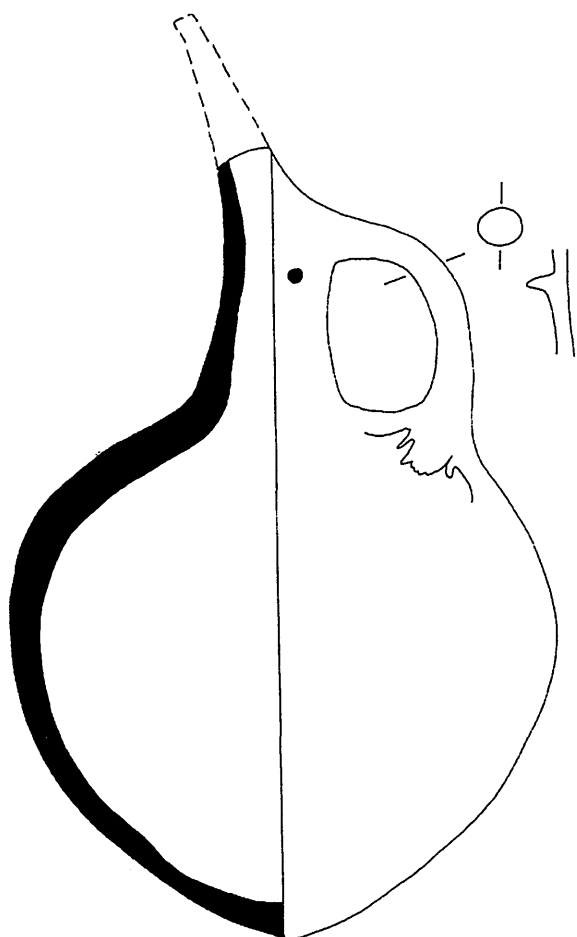


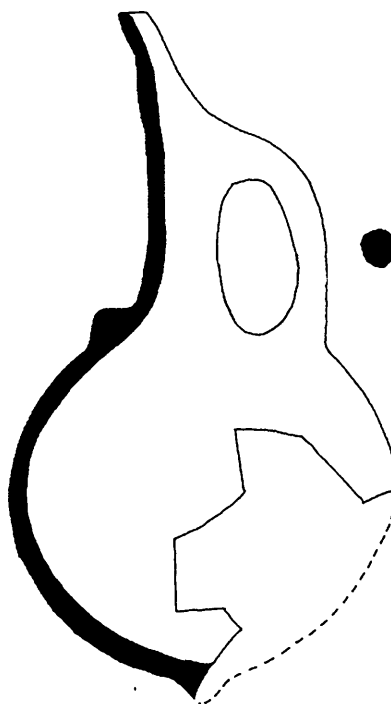
Figure 94: P16.8

**Tomb 16: Cutaway Spouted Jugs**

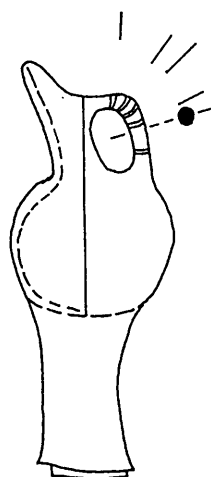
**Scale 1:2**



**Figure 95: P16.10**

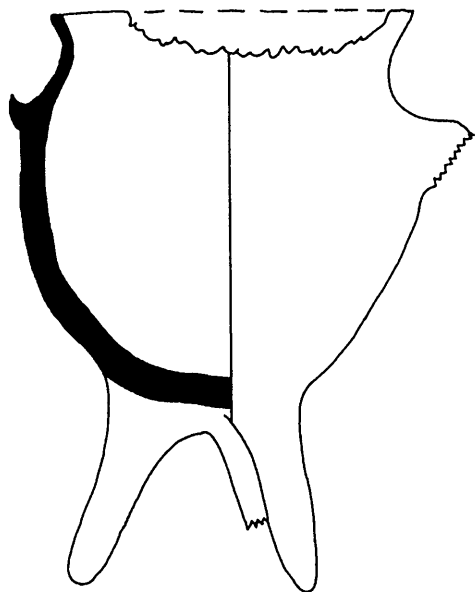


**Figure 96: P16.15**

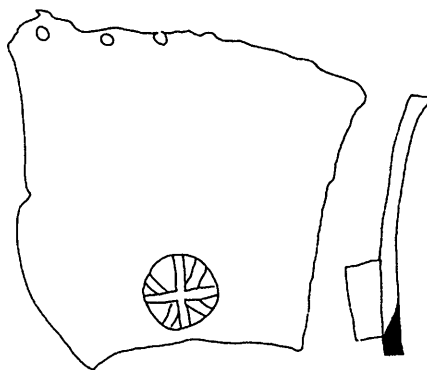


**Figure 97: P16.26**

**Tomb 16: Coarse Ware & Diagnostic**  
**Scale 1:2**



**Figure 98: P16.20**



**Figure 99: P16.F**

DPW from other sites

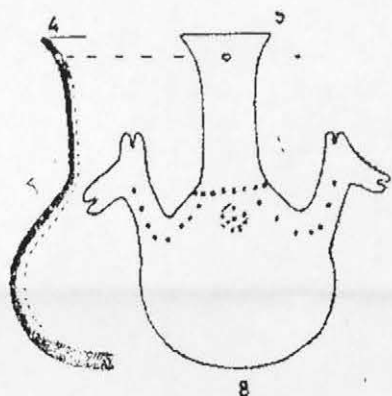


Figure 100: Flask found near Paphos  
(MacLaurin, 1980: 135)



Figure 101: Phaneromeni flask  
(Herscher, 1976: Plate II)



Figure 102: Black Slip vessel from Phaneromeni  
(Herscher, 1976: Plate IV)



P5.1



P5.2



P5.3



P5.4



P5.5



P5.6



P5.7



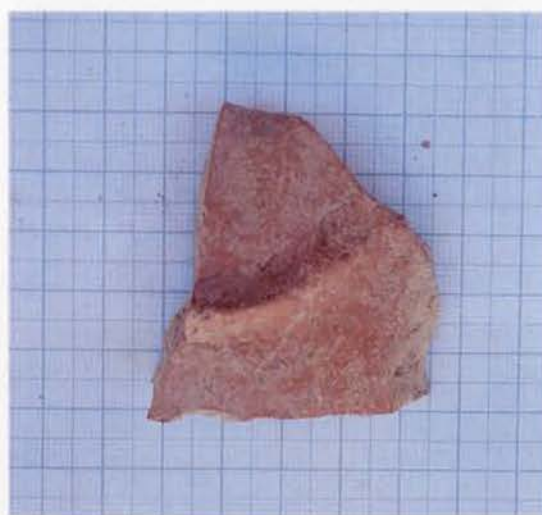
P5.8



P5.A

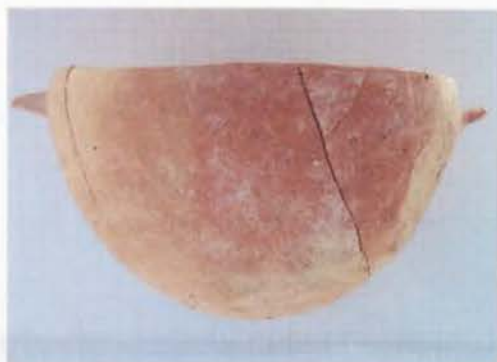


P5.B



P5.C





P10.1



P10.2



P10.3



P10.4





P10.5



P10.6



P10.7



P10.8



P10.9



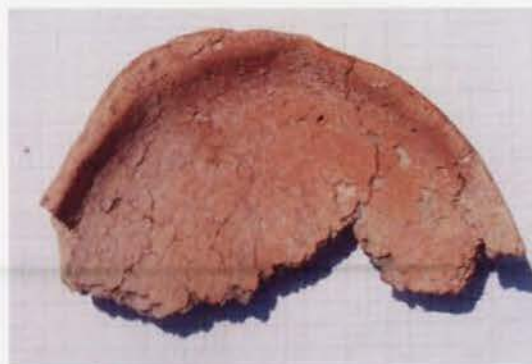
P10.10



P10.11



P10.12



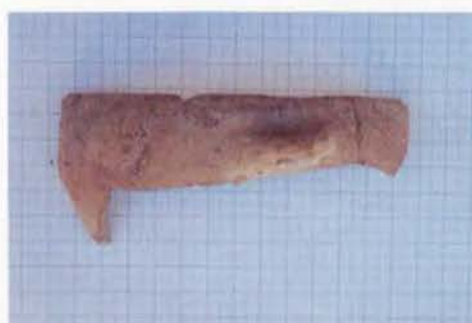
P10.13 Pan



P10.13 Leg

Plate VII

Tomb 10 Sherds A-H



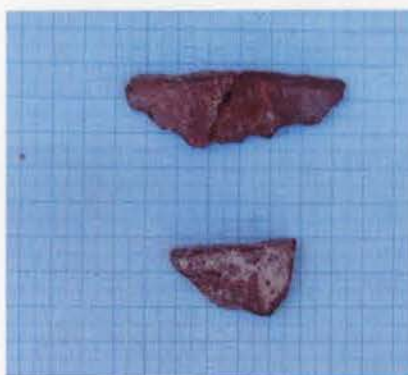
P10.A



P10.B



P10.C



P10.D & E



P10.F



P10.G



P10.H





P15.1



P15.2



P15.3



P15.4



P15.5



P15.6



P15.7



P15.8



P15.9



P15.10



P15.11



P15.12



P15.13



P15.14



P15.15



P15.16

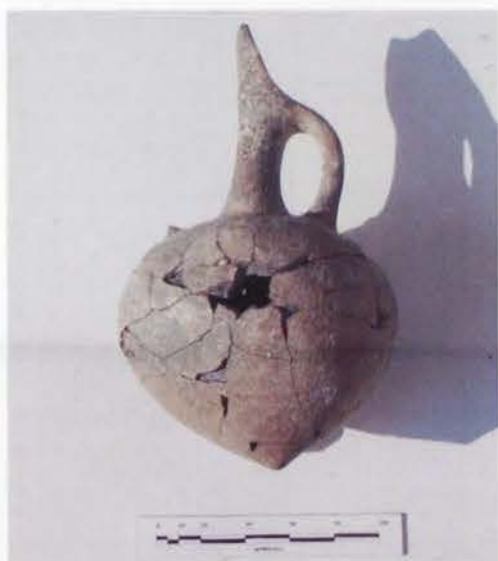


P15.17



P15.18





P15.19



P15.20



P15.21



P15.A



P15.B



P15.C



P15.D

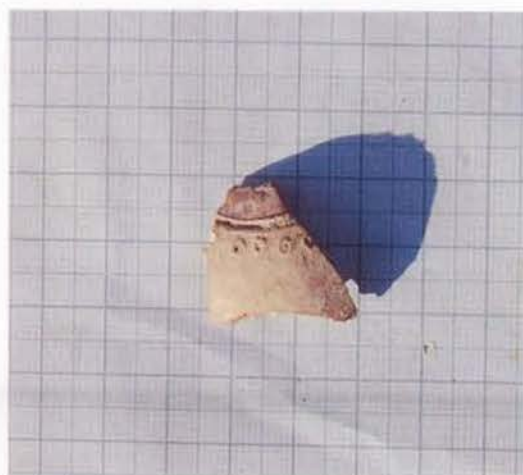


P15.E



P15.F

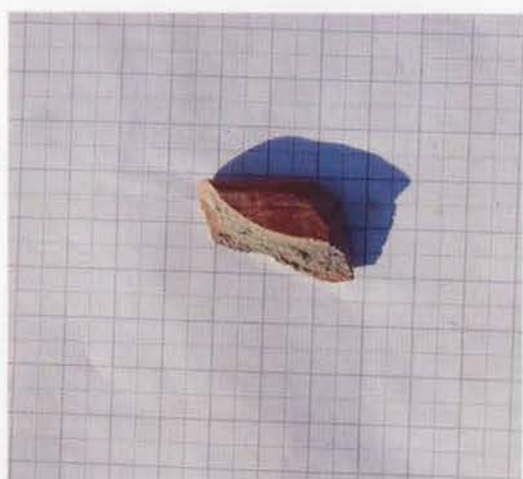




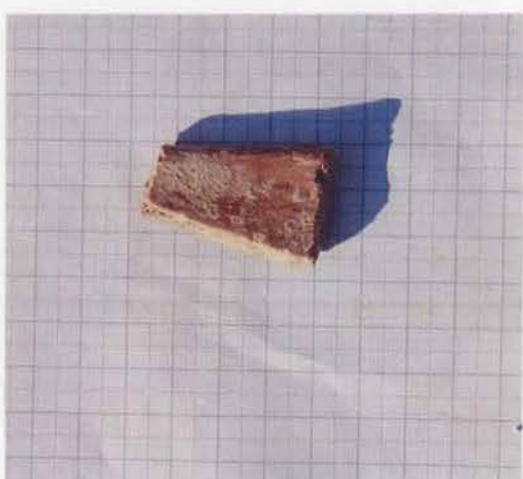
P15.G



P15.H



P15.I



P15.J



P16.1



P16.2



P16.3



P16.4



P16.5



P16.6



P16.7



P16.8



P16.9



P16.10



P16.11



P16.12





P16.13



P16.14



P16.15



P16.16



P16.17



P16.18



P16.19



P16.20



P16.21



P16.22



P16.23



P16.24



P16.25



P16.26





P16.A



P16.B (with P16.20)



P16.C



P16.D



P16.E



P16.F



P16.G



P16.H





P16.I



P16.J



P16.K



P16.L



P4.1



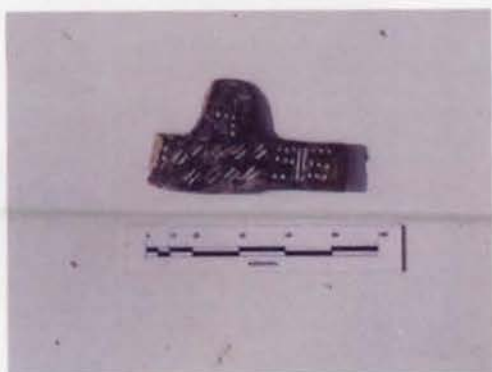
P4.1



P4.2



P4.3



P4.4



EPPH 010 004 Punctured DPBC  
From Episkopi-*Phaneromeni*.



Mar GL 010.005 DPW from Marki



EPPH 010 026 DPBC from  
Episkopi-*Phaneromeni*.



EPPH 010 026 DPBC from Episkopi-  
*Phanoremeni*.





**Levelled area of the cemetery**



**Levelled area with remains of tombs**



**Levelled Area with view to the sea**



**Possible remains of tomb**